

ISBN 0-7729-2134-2  
ISSN: 0830-162X

ACIDIC PRECIPITATION  
IN ONTARIO STUDY

ANNUAL STATISTICS OF  
CONCENTRATION AND DEPOSITION  
-CUMULATIVE PRECIPITATION SITES  
IN INDUSTRIAL/URBAN AREAS  
IN ONTARIO

January 4, 1983 - January 15, 1985

ARB-004-87-AQM

APIOS-001-87

APRIL 1987



Ministry  
of the  
Environment

E. PICHÉ, Director  
Air Resources Branch

### Copyright Provisions and Restrictions on Copying:

This Ontario Ministry of the Environment work is protected by Crown copyright (unless otherwise indicated), which is held by the Queen's Printer for Ontario. It may be reproduced for non-commercial purposes if credit is given and Crown copyright is acknowledged.

It may not be reproduced, in all or in part, for any commercial purpose except under a licence from the Queen's Printer for Ontario.

For information on reproducing Government of Ontario works, please contact ServiceOntario Publications at [copyright@ontario.ca](mailto:copyright@ontario.ca)

ISBN 0-7729-2134-2

ACIDIC PRECIPITATION IN ONTARIO STUDY ISSN: 0830-162X

**ANNUAL STATISTICS OF CONCENTRATION AND DEPOSITION  
- CUMULATIVE PRECIPITATION SITES IN INDUSTRIAL/URBAN  
AREAS IN ONTARIO, JANUARY 4, 1983 - JANUARY 15, 1985**

Atmospheric Processes Studies Unit  
Air Quality and Meteorology Section  
Ontario Ministry of the Environment  
Air Resources Branch  
880 Bay Street, 4th Floor  
Toronto, Ontario  
Canada, M5S 1Z8

APRIL 1987

ARB-004-87-AQM  
APIOS-001-87

A.P.I.O.S. Coordination Office  
Ontario Ministry of the Environment  
6th Floor, 40 St. Clair Avenue West  
Toronto, Ontario  
Canada, M4V 1P5  
Project Co-ordinator: Dr. G.W. Scott

c 1986 Her Majesty the Queen in Right of Ontario

TO  
196  
A25  
A345  
1983-85  
MOE  
AP105

HQFX



### ACKNOWLEDGEMENTS

This report was prepared by Diane Green of the APIOS Atmospheric Deposition and Chemistry Program. However, the data themselves are a product of the combined efforts of many individuals. Precipitation samples were collected by a large number of site operators, whose names cannot be individually mentioned here, under the coordination of the APIOS environmental technicians Jayne Blight (Haldimand-Norfolk), Rod Brooks (Germain Park), Errol Butler (Toronto) and Chris Hutt (Sudbury). Sample handling was carried out by Dan Orr and Liane Skelton, and overall network coordination by Bill Bardswick of the Air Resources Branch. Chemical analyses were performed at the Laboratory Services Branch under the coordination of Frank Tomassini and Barry Loescher. Invaluable clerical and computer assistance were provided by Koshy Mathew and William Chang, respectively of C.C. and C. Computer Systems Inc.

**TABLE OF CONTENTS**

		<u>Page</u>																																				
<b>PART I</b>	<b>INTRODUCTION</b>	III																																				
<b>PART II</b>	<b>STATION DESCRIPTION AND LOCATION MAP</b>	V																																				
<b>PART III</b>	<b>SUMMARY STATISTICS OF PRECIPITATION CONCENTRATION BY STATION For 1983</b>																																					
	<table><tr><td><u>Station</u></td><td><u>Map Ref. No.</u></td><td></td></tr><tr><td>Binbrook</td><td>01</td><td>1</td></tr><tr><td>Burwash</td><td>07</td><td>3</td></tr><tr><td>Canborough</td><td>02</td><td>5</td></tr><tr><td>Dog's Nest East</td><td>03</td><td>7</td></tr><tr><td>Germain Park</td><td>10</td><td>9</td></tr><tr><td>Hanmer</td><td>08</td><td>11</td></tr><tr><td>Lively</td><td>09</td><td>13</td></tr><tr><td>North Dufferin</td><td>04</td><td>15</td></tr><tr><td>South Canfield</td><td>05</td><td>17</td></tr><tr><td>Toronto</td><td>11</td><td>19</td></tr><tr><td>Villa Nova</td><td>06</td><td>21</td></tr></table>	<u>Station</u>	<u>Map Ref. No.</u>		Binbrook	01	1	Burwash	07	3	Canborough	02	5	Dog's Nest East	03	7	Germain Park	10	9	Hanmer	08	11	Lively	09	13	North Dufferin	04	15	South Canfield	05	17	Toronto	11	19	Villa Nova	06	21	
<u>Station</u>	<u>Map Ref. No.</u>																																					
Binbrook	01	1																																				
Burwash	07	3																																				
Canborough	02	5																																				
Dog's Nest East	03	7																																				
Germain Park	10	9																																				
Hanmer	08	11																																				
Lively	09	13																																				
North Dufferin	04	15																																				
South Canfield	05	17																																				
Toronto	11	19																																				
Villa Nova	06	21																																				
<b>PART IV</b>	<b>SUMMARY STATISTICS OF PRECIPITATION CONCENTRATION BY REGION For 1983</b>																																					
	Haldiman-Norfolk (NEMP) Region	23																																				
	Sudbury Region	25																																				
<b>PART V</b>	<b>SUMMARY STATISTICS OF WET DEPOSITION BY STATION For 1983</b>																																					
	<table><tr><td><u>Station</u></td><td><u>Map Ref. No.</u></td><td></td></tr><tr><td>Binbrook</td><td>01</td><td>27</td></tr><tr><td>Burwash</td><td>07</td><td>29</td></tr><tr><td>Canborough</td><td>02</td><td>31</td></tr><tr><td>Dog's Nest East</td><td>03</td><td>33</td></tr><tr><td>Germain Park</td><td>10</td><td>35</td></tr><tr><td>Hanmer</td><td>08</td><td>37</td></tr><tr><td>Lively</td><td>09</td><td>39</td></tr><tr><td>North Dufferin</td><td>04</td><td>41</td></tr><tr><td>South Canfield</td><td>05</td><td>43</td></tr><tr><td>Toronto</td><td>11</td><td>45</td></tr><tr><td>Villa Nova</td><td>06</td><td>47</td></tr></table>	<u>Station</u>	<u>Map Ref. No.</u>		Binbrook	01	27	Burwash	07	29	Canborough	02	31	Dog's Nest East	03	33	Germain Park	10	35	Hanmer	08	37	Lively	09	39	North Dufferin	04	41	South Canfield	05	43	Toronto	11	45	Villa Nova	06	47	
<u>Station</u>	<u>Map Ref. No.</u>																																					
Binbrook	01	27																																				
Burwash	07	29																																				
Canborough	02	31																																				
Dog's Nest East	03	33																																				
Germain Park	10	35																																				
Hanmer	08	37																																				
Lively	09	39																																				
North Dufferin	04	41																																				
South Canfield	05	43																																				
Toronto	11	45																																				
Villa Nova	06	47																																				
<b>PART VI</b>	<b>SUMMARY STATISTICS OF WET DEPOSITION BY REGION For 1983</b>																																					
	Haldimand-Norfold (NEMP) Region	49																																				
	Sudbury Region	51																																				

**PART VI      SUMMARY STATISTICS OF PRECIPITATION  
CONCENTRATION BY STATION For 1984**

<u>Station</u>	<u>Map Ref. No.</u>	
Burwash	07	53
Dog's Nest East	03	55
Germain Park	10	57
Hanmer	08	59
Lively	09	61
North Dufferin	04	63
Toronto	11	65

**PART VIII    SUMMARY STATISTICS OF PRECIPITATION  
CONCENTRATION BY REGION For 1984**

Haldiman-Norfolk (NEMP) Region	67
Sudbury Region	69

**PART IX      SUMMARY STATISTICS OF WET DEPOSITION  
BY STATION For 1984**

<u>Station</u>	<u>Map Ref. No.</u>	
Burwash	07	71
Dog's Nest East	03	73
Germain Park	10	75
Hanmer	08	77
Lively	09	79
North Dufferin	04	81
Toronto	11	83

**PART X      SUMMARY STATISTICS OF WET DEPOSITION  
BY REGION For 1984**

Haldimand-Norfolk (NEMP) Region	85
Sudbury Region	87

PART I  
INTRODUCTION

- III -  
INTRODUCTION

The statistical summaries presented in this report pertain to the 1983 and 1984 analytical results obtained from the Acidic Precipitation in Ontario Study (APIOS) cumulative precipitation sites in industrial and urban areas in Ontario. The relevant data can be obtained on request from the Air Resources Branch of The Ontario Ministry of the Environment<sup>(1)</sup>. All available data are utilized in the calculations except results reported as being unreliable (i.e., results are identified as unreasonable values by using the validation procedures; detailed description of the validation procedures is available from the Ministry upon request) or approximate (i.e., inexact results are reported due to laboratory difficulties, such as maybe encountered in calibration, or when the sample cannot be re-analyzed to confirm the reported value). In a very few cases, concentration levels exceeded the upper limit of the range of the chemical analysis. Rather than using the upper limit, a decision was made to exclude these values from the statistics generated in this report. Reported results for metals which have missing leachate analysis are also excluded from statistical analysis. Results labelled as  $< W$  are replaced by "zero".  $W$  is the level which the analytical technique cannot distinguish from zero. If a level is recorded less than the detection limit  $T$ , a value corresponding to one half the detection limit is utilized for statistical calculations as reported in the statistical summaries. Note that  $T$  is normally about ten times  $W$ , and values above the  $T$  criteria are considered to be precise and accurate.

The reported cumulative precipitation gauge depth (or an interpolated value from Environment Canada's CLIMAT data) is utilized in the calculation of deposition. If a precipitation gauge value is not available, then the collected sample volume is converted to its equivalent precipitation depth and is used in the deposition calculation.

The statistical summaries presented in Parts III to X include number of samples, mean (arithnetic/geometric), standard deviation (arithnetic/geometric), maximum, minimum, quartiles and precipitation weighted means using precipitation gauge depths where appropriate. These statistics are for an average sampling period. Data which correspond to irregular sampling periods were either combined if they are from consecutive collection periods which span  $28d \pm 5d$ , or deleted, before the statistics are generated.

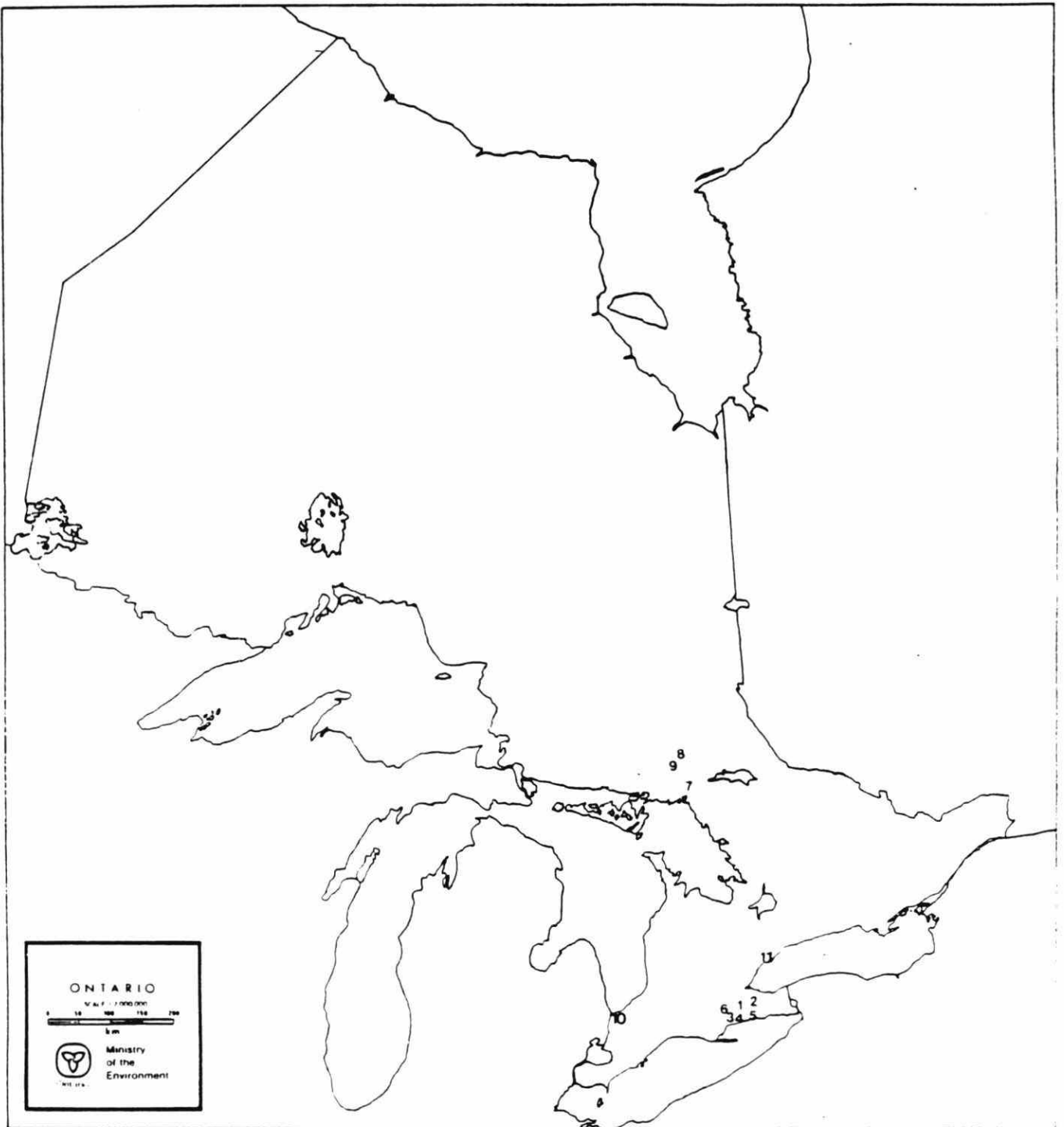
(1) APIOS Cumulative (28 Day) Precipitation Chemistry Listings of Sites in Industrial/Urban Areas in Ontario, Janaury 4, 1983 - January 15, 1985.

The regional statistics summaries are presented for only two regions (i.e. Haldimand-Norkfold Region and Sudbury Region), since data for the remaining stations is insufficient for regional representation.

6APS4

**PART II**

**STATION DESCRIPTION AND LOCATION MAP**



- |                     |                    |                   |
|---------------------|--------------------|-------------------|
| 1 - BINBROOK        | 5 - SOUTH CANFIELD | 9 - LIVELY        |
| 2 - CANBOROUGH      | 6 - VILLA NOVA     | 10 - GERMAIN PARK |
| 3 - DOG'S NEST EAST | 7 - BURWASH        | 11 - TORONTO      |
| 4 - NORTH DUFFERIN  | 8 - HANMER         |                   |



SITE DESCRIPTIONS OF STATIONS IN INDUSTRIAL/URBAN AREAS

<u>MOE REGION</u>	<u>STATION NAME</u>	<u>LATITUDE</u> (North)	<u>LONGITUDE</u> (West)	<u>UTM GRID CO-ORDINATES</u>	
				(Northing)	(Easting)
Haldimond- Norfolk (NEMP)	Binbrook	43°07'06"	79°52'40"	4774500	591400
	Canborough	42°59'77"	79°38'42"	4760800	611950
	Dog's Nest East	41°48'40"	80°08'46"	4739600	570200
	North Dufferin	42°59'39"	79°58'38"	4759990	583750
	South Canfield	42°55'39"	79°44'49"	4752700	602600
	Villa Nova	42°55'39"	80°12'13"	4753500	565400
Sudbury	Burwash	46°15'46"	80°48'48"	5123000	514600
	Hanmer	46°39'45"	80°56'37"	5167400	504300
	Lively	46°26'45"	81°09'00"	5143400	488400
Other Sites	Germain Park	42°58'35"	82°23'00"	4758750	387250
	Toronto	43°39'15"	79°23'14"	4835500	630100

PART III

SUMMARY STATISTICS OF PRECIPITATION CONCENTRATION BY STATION

1983

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY  
-----

STATION NAME : BINBROOK/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4,83 TO JAN 3,84

PAGE : 1

	PRECIP. MM	CONDUCT. UMHO/CM	PH LAB	FREE H+ LAB MG/L	TOTAL H+ GRAN MG/L	SULPHATE MG/L	NITRATE AS N MG/L
# OF SAMPLES :	13	10	11	11	11	11	11
MAXIMUM :	160.0	65.0	4.77	0.0891	0.1230	9.30	0.950
MINIMUM :	11.0	18.6	4.05	0.0170	0.0157	1.85	0.350
RANGE :	149.0	46.4	0.72	0.0721	0.1073	7.45	0.600
ARITH. MEAN :	66.8	38.2	4.35	0.0512	0.0774	4.88	0.655
ARITH. STD. DEV :	38.8	13.8	0.25	0.0253	0.0344	1.98	0.226
GEOM. MEAN :	55.4	36.0	4.34	0.0450	0.0681	4.53	0.618
GEOM. STD. DEV. :	2.0	1.5	1.06	1.7591	1.8165	1.52	1.439
1ST QUARTILE :	38.7	26.0	4.09	0.0253	0.0492	3.45	0.425
2ND QUARTILE :	64.0	36.6	4.31	0.0417	0.0688	4.52	0.550
3RD QUARTILE :	75.6	44.2	4.45	0.0695	0.1042	5.22	0.860
VOL. WGT. MEAN :	*****	37.5	*****	0.0522	0.0824	4.77	0.596

	CALCIUM MG/L	CHLORIDE MG/L	KJELDAHL AS N MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L
# OF SAMPLES :	10	11	12	10	10	10	11
MAXIMUM :	1.180	1.760	3.100	0.360	0.140	0.575	1.420
MINIMUM :	0.420	0.130	0.170	0.090	0.020	0.025	0.040
RANGE :	0.760	1.630	2.930	0.270	0.120	0.550	1.380
ARITH. MEAN :	0.747	0.501	0.862	0.210	0.055	0.189	0.531
ARITH. STD. DEV :	0.297	0.485	0.781	0.099	0.035	0.202	0.348
GEOM. MEAN :	0.693	0.361	0.668	0.188	0.048	0.112	0.415
GEOM. STD. DEV. :	1.508	2.231	2.033	1.649	1.771	3.001	2.416
1ST QUARTILE :	0.435	0.195	0.480	0.113	0.030	0.042	0.336
2ND QUARTILE :	0.660	0.245	0.635	0.192	0.042	0.092	0.435
3RD QUARTILE :	1.030	0.685	0.845	0.280	0.067	0.238	0.565
VOL. WGT. MEAN :	0.648	0.410	0.631	0.176	0.054	0.145	0.491

\*\*\*\*\* : INSUFFICIENT DATA OR NOT APPLICABLE  
NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY  
-----

STATION NAME : BINBROOK/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4,83 TO JAN 3,84

PAGE : 2

	PHOSPHOR	MANGANESE	NICKEL	ZINC	IRON	LEAD	VANADIUM
	MG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
# OF SAMPLES :	12	11	11	10	10	10	11
MAXIMUM :	0.0620	36.00	1.00	43.10	261.10	25.20	1.00
MINIMUM :	0.0070	4.00	0.50	4.27	23.68	4.31	1.00
RANGE :	0.0550	32.00	0.50	38.83	237.42	20.89	0.00
ARITH. MEAN :	0.0243	11.36	0.55	14.70	116.39	13.07	1.00
ARITH. STD. DEV :	0.0166	8.97	0.15	11.08	82.40	6.89	0.00
GEOM. MEAN :	0.0198	9.31	0.53	12.06	92.62	11.36	1.00
GEOM. STD. DEV. :	1.9740	1.87	1.23	1.90	2.09	1.78	1.00
1ST QUARTILE :	0.0135	5.00	0.50	7.19	54.44	7.03	1.00
2ND QUARTILE :	0.0200	8.50	0.50	12.11	92.70	12.66	1.00
3RD QUARTILE :	0.0325	12.50	0.50	15.56	124.50	17.60	1.00
VOL. WGT. MEAN :	0.0183	8.25	0.51	10.11	91.26	10.13	1.00
	ALUMINUM	COPPER	CADMIUM				
	UG/L	UG/L	UG/L				
# OF SAMPLES :	10	10	11				
MAXIMUM :	241.60	7.05	0.20				
MINIMUM :	30.84	0.73	0.05				
RANGE :	210.76	6.32	0.15				
ARITH. MEAN :	100.45	2.22	0.09				
ARITH. STD. DEV :	64.60	1.90	0.06				
GEOM. MEAN :	84.75	1.72	0.07				
GEOM. STD. DEV. :	1.84	2.07	1.77				
1ST QUARTILE :	53.94	0.81	0.05				
2ND QUARTILE :	75.70	1.72	0.05				
3RD QUARTILE :	121.94	2.49	0.10				
VOL. WGT. MEAN :	87.73	1.58	0.06				

1  
2  
1

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

---

STATION NAME : BURWASH/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 5,83 TO DEC 6,83

PAGE : 1

	PRECIP.	CONDUCT.	PH	FREE H+	TOTAL H+	SULPHATE	NITRATE
	MM	UMHO/CM	LAB	LAB MG/L	GRAN MG/L	MG/L	AS N MG/L
# OF SAMPLES :	12	11	12	12	12	12	12
MAXIMUM :	130.0	122.0	4.57	0.2138	0.2730	14.20	1.230
MINIMUM :	24.0	18.5	3.67	0.0269	0.0447	2.55	0.240
RANGE :	106.0	103.5	0.90	0.1869	0.2283	11.65	0.990
ARITH. MEAN :	60.6	44.8	4.20	0.0743	0.1062	4.31	0.587
ARITH. STD. DEV :	36.6	28.2	0.24	0.0512	0.0598	3.28	0.322
GEOM. MEAN :	51.7	39.6	4.19	0.0632	0.0952	3.71	0.519
GEOM. STD. DEV. :	1.8	1.6	1.06	1.7566	1.5859	1.64	1.655
1ST QUARTILE :	31.3	30.6	4.11	0.0483	0.0771	2.70	0.350
2ND QUARTILE :	45.8	33.8	4.22	0.0610	0.0873	3.02	0.520
3RD QUARTILE :	86.8	45.5	4.32	0.0767	0.1165	4.27	0.710
VOL. WGT. MEAN :	*****	39.7	*****	0.0621	0.0932	3.76	0.494
	CALCIUM	CHLORIDE	KJELDAHL	MAGNESIM	POTASSIM	SODIUM	AMMONIUM
	MG/L	MG/L	AS N MG/L	MG/L	MG/L	MG/L	AS N MG/L
# OF SAMPLES :	12	12	12	12	12	12	12
MAXIMUM :	0.630	1.310	1.820	0.140	0.130	1.150	1.450
MINIMUM :	0.090	0.060	0.190	0.000	0.008	0.010	0.152
RANGE :	0.540	1.250	1.630	0.140	0.122	1.140	1.298
ARITH. MEAN :	0.198	0.378	0.537	0.036	0.044	0.285	0.457
ARITH. STD. DEV :	0.152	0.440	0.431	0.037	0.036	0.390	0.349
GEOM. MEAN :	0.166	0.240	0.447	0.042	0.031	0.117	0.380
GEOM. STD. DEV. :	1.781	2.538	1.780	1.965	2.486	4.347	1.805
1ST QUARTILE :	0.105	0.140	0.320	0.020	0.017	0.045	0.267
2ND QUARTILE :	0.140	0.225	0.400	0.025	0.037	0.120	0.337
3RD QUARTILE :	0.250	0.315	0.565	0.035	0.062	0.325	0.535
VOL. WGT. MEAN :	0.172	0.271	0.465	0.033	0.038	0.178	0.395

\*\*\*\*\* : INSUFFICIENT DATA OR NOT APPLICABLE  
NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY  
-----

STATION NAME : BURWASH/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 5,83 TO DEC 6,83

PAGE : 2

	PHOSPHOR	MANGANSE	NICKEL	ZINC	IRON	LEAD	VANADIUM
	MG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
# OF SAMPLES :	12	12	12	11	11	11	12
MAXIMUM :	0.0390	12.00	15.00	20.56	182.00	21.55	1.00
MINIMUM :	0.0005	1.00	0.50	4.29	30.80	6.14	1.00
RANGE :	0.0385	11.00	14.50	16.27	151.20	15.41	0.00
ARITH. MEAN :	0.0107	2.92	2.08	8.10	78.77	10.34	1.00
ARITH. STD. DEV. :	0.0106	3.00	4.14	5.13	54.06	5.23	0.00
GEOM. MEAN :	0.0068	2.21	0.92	7.09	64.52	9.42	1.00
GEOM. STD. DEV. :	3.0506	2.01	2.94	1.64	1.91	1.53	1.00
1ST QUARTILE :	0.0050	1.50	0.50	5.02	36.64	6.78	1.00
2ND QUARTILE :	0.0085	2.00	0.50	5.61	50.06	7.75	1.00
3RD QUARTILE :	0.0105	3.00	1.50	8.25	120.10	11.48	1.00
VOL. WGT. MEAN :	0.0101	2.37	1.51	6.55	67.75	8.49	1.00

	ALUMINUM	COPPER	CADMIUM
	UG/L	UG/L	UG/L
# OF SAMPLES :	11	11	12
MAXIMUM :	106.30	23.55	0.60
MINIMUM :	20.22	0.80	0.05
RANGE :	86.08	22.75	0.55
ARITH. MEAN :	50.77	4.55	0.20
ARITH. STD. DEV. :	27.93	6.46	0.21
GEOM. MEAN :	44.47	2.80	0.12
GEOM. STD. DEV. :	1.71	2.50	2.65
1ST QUARTILE :	26.44	1.27	0.05
2ND QUARTILE :	37.26	2.33	0.10
3RD QUARTILE :	66.01	3.72	0.25
VOL. WGT. MEAN :	49.55	3.48	0.15

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY  
-----

STATION NAME : CANBOROUGH/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4,83 TO JAN 3,84

PAGE : 1

	PRECIP. MM	CONDUCT. UMHO/CM	PH LAB	FREE H+ LAB MG/L	TOTAL H+ GRAN MG/L	SULPHATE MG/L	NITRATE AS N MG/L
# OF SAMPLES :	13	12	13	13	13	12	13
MAXIMUM :	161.0	61.0	7.64	0.0933	0.1840	7.20	1.160
MINIMUM :	19.0	18.4	4.03	0.0000	0.0146	2.40	0.350
RANGE :	142.0	42.6	3.61	0.0933	0.1694	4.80	0.810
ARITH. MEAN :	77.9	37.6	4.67	0.0421	0.0745	4.54	0.643
ARITH. STD. DEV :	38.6	14.0	0.94	0.0274	0.0427	1.57	0.260
GEOM. MEAN :	67.8	35.1	4.60	0.0215	0.0636	4.28	0.601
GEOM. STD. DEV. :	1.8	1.5	1.18	8.7156	1.8589	1.44	1.451
1ST QUARTILE :	45.5	25.3	4.27	0.0251	0.0471	3.20	0.460
2ND QUARTILE :	75.9	37.1	4.37	0.0352	0.0621	4.67	0.575
3RD QUARTILE :	93.5	47.4	4.53	0.0531	0.0860	5.35	0.630
VOL. WGT. MEAN :	*****	34.5	*****	0.0402	0.0722	4.52	0.562

	CALCIUM MG/L	CHLORIDE MG/L	KJELDAHL AS N MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L
# OF SAMPLES :	13	13	13	13	12	13	13
MAXIMUM :	2.200	0.610	3.250	0.720	0.685	0.295	1.430
MINIMUM :	0.200	0.130	0.580	0.055	0.000	0.000	0.018
RANGE :	2.000	0.480	2.670	0.665	0.685	0.295	1.412
ARITH. MEAN :	0.570	0.288	1.224	0.165	0.124	0.089	0.816
ARITH. STD. DEV :	0.515	0.157	0.750	0.176	0.212	0.077	0.383
GEOM. MEAN :	0.461	0.253	1.073	0.124	0.078	0.091	0.622
GEOM. STD. DEV. :	1.830	1.680	1.652	2.001	3.040	2.102	3.046
1ST QUARTILE :	0.305	0.165	0.760	0.077	0.027	0.030	0.580
2ND QUARTILE :	0.440	0.215	0.835	0.100	0.040	0.075	0.740
3RD QUARTILE :	0.525	0.350	1.320	0.145	0.062	0.095	0.985
VOL. WGT. MEAN :	0.465	0.261	1.107	0.127	0.116	0.081	0.726

\*\*\*\*\* : INSUFFICIENT DATA OR NOT APPLICABLE  
NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY  
-----

STATION NAME : CANBOROUGH/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4,83 TO JAN 3,84

PAGE : 2

	PHOSPHOR	MANGANSE	NICKEL	ZINC	IRON	LEAD	VANADIUM
	MG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
# OF SAMPLES :	12	13	13	12	12	12	13
MAXIMUM :	0.1280	16.00	1.00	28.45	159.50	33.50	1.00
MINIMUM :	0.0100	2.00	0.50	4.39	23.11	0.69	1.00
RANGE :	0.1180	14.00	0.50	24.06	136.39	32.80	0.00
ARITH. MEAN :	0.0293	5.23	0.54	11.31	73.23	10.64	1.00
ARITH. STD. DEV :	0.0357	3.59	0.14	6.95	38.88	8.35	0.00
GEOM. MEAN :	0.0197	4.52	0.53	9.83	64.54	7.65	1.00
GEOM. STD. DEV. :	2.2404	1.68	1.21	1.70	1.70	2.69	1.00
1ST QUARTILE :	0.0115	3.00	0.50	7.31	44.58	6.54	1.00
2ND QUARTILE :	0.0150	4.00	0.50	9.30	67.46	9.55	1.00
3RD QUARTILE :	0.0230	5.00	0.50	12.29	86.98	13.20	1.00
VOL. WGT. MEAN :	0.0241	4.47	0.54	10.40	63.32	10.23	1.00

	ALUMINUM	COPPER	CADMIUM
	UG/L	UG/L	UG/L
# OF SAMPLES :	12	12	13
MAXIMUM :	126.80	3.57	0.20
MINIMUM :	25.96	0.69	0.05
RANGE :	100.84	2.88	0.15
ARITH. MEAN :	65.28	1.65	0.08
ARITH. STD. DEV :	28.98	0.89	0.04
GEOM. MEAN :	59.69	1.44	0.07
GEOM. STD. DEV. :	1.56	1.72	1.58
1ST QUARTILE :	44.40	0.90	0.05
2ND QUARTILE :	57.68	1.37	0.05
3RD QUARTILE :	90.85	2.27	0.10
VOL. WGT. MEAN :	60.46	1.33	0.07



ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY  
-----

STATION NAME : DOG'S NEST EAST/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4,83 TO DEC 6,83

PAGE : 1

	PRECIP. MM	CONDUCT. UMHO/CM	PH LAB	FREE H+ LAB MG/L	TOTAL H+ GRAN MG/L	SULPHATE MG/L	NITRATE AS N MG/L
# OF SAMPLES :	12	11	12	12	12	12	12
MAXIMUM :	214.0	53.8	4.38	0.0955	0.1950	5.90	0.730
MINIMUM :	30.0	23.4	4.02	0.0417	0.0422	2.30	0.300
RANGE :	184.0	30.4	0.36	0.0538	0.1528	3.60	0.430
ARITH. MEAN :	73.5	38.5	4.22	0.0620	0.0997	3.86	0.511
ARITH. STD. DEV :	50.4	9.8	0.12	0.0176	0.0393	1.20	0.139
GEOM. MEAN :	62.8	37.3	4.22	0.0599	0.0931	3.70	0.492
GEOM. STD. DEV. :	1.7	1.3	1.03	1.3125	1.4829	1.36	1.335
1ST QUARTILE :	42.3	28.6	4.14	0.0497	0.0747	2.82	0.380
2ND QUARTILE :	56.0	35.7	4.24	0.0575	0.0967	3.77	0.535
3RD QUARTILE :	89.5	46.3	4.31	0.0724	0.1180	4.55	0.620
VOL. WGT. MEAN :	*****	38.5	*****	0.0613	0.1055	3.88	0.480

	CALCIUM MG/L	CHLORIDE MG/L	KJELDAHL AS N MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L
# OF SAMPLES :	12	12	12	12	12	12	12
MAXIMUM :	0.520	0.540	1.030	0.100	0.070	0.135	0.690
MINIMUM :	0.200	0.060	0.200	0.030	0.005	0.025	0.150
RANGE :	0.320	0.480	0.830	0.070	0.065	0.110	0.540
ARITH. MEAN :	0.374	0.207	0.457	0.066	0.038	0.069	0.354
ARITH. STD. DEV :	0.109	0.132	0.227	0.023	0.018	0.034	0.174
GEOM. MEAN :	0.357	0.176	0.413	0.062	0.033	0.062	0.317
GEOM. STD. DEV. :	1.389	1.826	1.586	1.477	1.999	1.667	1.636
1ST QUARTILE :	0.275	0.135	0.305	0.042	0.027	0.050	0.223
2ND QUARTILE :	0.400	0.170	0.445	0.072	0.040	0.055	0.353
3RD QUARTILE :	0.455	0.260	0.510	0.082	0.050	0.085	0.425
VOL. WGT. MEAN :	0.352	0.214	0.422	0.060	0.039	0.066	0.338

\*\*\*\*\* : INSUFFICIENT DATA OR NOT APPLICABLE  
NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY  
-----

STATION NAME : DOG'S NEST EAST/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4,83 TO DEC 6,83

PAGE : 2

	PHOSPHOR	MANGANESE	NICKEL	ZINC	IRON	LEAD	VANADIUM
	MG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
# OF SAMPLES :	12	12	12	11	11	11	12
MAXIMUM :	0.0300	15.00	0.50	12.34	142.70	15.12	1.00
MINIMUM :	0.0060	2.00	0.50	3.69	28.24	3.63	1.00
RANGE :	0.0240	13.00	0.00	8.65	114.46	11.49	0.00
ARITH. MEAN :	0.0126	6.33	0.50	7.09	64.47	9.48	1.00
ARITH. STD. DEV :	0.0069	3.47	0.00	2.30	31.09	4.36	0.00
GEOM. MEAN :	0.0113	5.58	0.50	6.77	58.70	8.44	1.00
GEOM. STD. DEV. :	1.5785	1.70	1.00	1.37	1.57	1.70	1.00
1ST QUARTILE :	0.0085	4.50	0.50	5.47	39.39	4.98	1.00
2ND QUARTILE :	0.0100	5.50	0.50	6.52	56.76	8.77	1.00
3RD QUARTILE :	0.0150	7.50	0.50	8.05	74.58	13.06	1.00
VOL. WGT. MEAN :	0.0113	6.17	0.50	6.76	58.35	9.54	1.00

	ALUMINUM	COPPER	CADMIUM
	UG/L	UG/L	UG/L
# OF SAMPLES :	11	11	12
MAXIMUM :	122.40	2.45	0.20
MINIMUM :	22.93	0.88	0.05
RANGE :	99.47	1.57	0.15
ARITH. MEAN :	57.59	1.74	0.08
ARITH. STD. DEV :	31.55	0.51	0.06
GEOM. MEAN :	50.57	1.67	0.07
GEOM. STD. DEV. :	1.71	1.37	1.73
1ST QUARTILE :	29.63	1.33	0.05
2ND QUARTILE :	49.11	1.54	0.05
3RD QUARTILE :	67.94	2.22	0.07
VOL. WGT. MEAN :	55.69	1.77	0.10

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY  
-----

STATION NAME : GERMAIN PARK/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4,83 TO JAN 3,84

PAGE : 1

	PRECIP. MM	CONDUCT. UMHO/CM	PH LAB	FREE H+ LAB MG/L	TOTAL H+ GRAN MG/L	SULPHATE MG/L	NITRATE AS N MG/L
# OF SAMPLES :	13	12	11	11	11	12	12
MAXIMUM :	119.5	103.0	7.70	0.0617	0.0902	25.30	2.960
MINIMUM :	20.8	16.6	4.21	0.0000	0.0123	2.85	0.460
RANGE :	98.7	86.4	3.49	0.0616	0.0779	22.45	2.500
ARITH. MEAN :	59.5	48.0	6.73	0.0062	0.0250	10.09	1.150
ARITH. STD. DEV :	29.8	26.5	1.06	0.0185	0.0220	6.22	0.712
GEOM. MEAN :	52.7	41.7	6.64	0.0002	0.0209	8.53	0.986
GEOM. STD. DEV. :	1.7	1.8	1.20	11.5086	1.6989	1.85	1.766
1ST QUARTILE :	36.6	31.3	5.99	0.0000	0.0154	5.95	0.610
2ND QUARTILE :	53.1	44.4	7.01	0.0001	0.0175	7.92	1.035
3RD QUARTILE :	66.3	56.5	7.24	0.0001	0.0223	12.90	1.440
VOL. WGT. MEAN :	*****	41.6	*****	0.0028	0.0204	8.91	0.984

	CALCIUM MG/L	CHLORIDE MG/L	KJELDAHL AS N MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L
# OF SAMPLES :	11	12	12	11	11	11	11
MAXIMUM :	9.000	3.140	3.350	1.750	0.230	0.780	1.410
MINIMUM :	1.530	0.350	0.430	0.380	0.025	0.000	0.230
RANGE :	7.470	2.790	2.920	1.370	0.205	0.780	1.180
ARITH. MEAN :	3.776	0.879	1.202	0.800	0.083	0.240	0.750
ARITH. STD. DEV :	2.121	0.794	0.793	0.411	0.055	0.233	0.392
GEOM. MEAN :	3.317	0.686	1.018	0.717	0.071	0.232	0.649
GEOM. STD. DEV. :	1.701	1.968	1.811	1.627	1.803	2.051	1.802
1ST QUARTILE :	1.835	0.375	0.705	0.430	0.045	0.087	0.358
2ND QUARTILE :	3.250	0.590	1.060	0.707	0.065	0.155	0.630
3RD QUARTILE :	4.500	1.060	1.450	1.040	0.098	0.250	1.080
VOL. WGT. MEAN :	3.447	0.705	1.086	0.747	0.074	0.186	0.692

\*\*\*\*\* : INSUFFICIENT DATA OR NOT APPLICABLE  
NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY  
-----

STATION NAME : GERMAIN PARK/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4,83 TO JAN 3,84

PAGE : 2

	PHOSPHOR	MANGANSE	NICKEL	ZINC	IRON	LEAD	VANADIUM
	MG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
# OF SAMPLES :	12	9	9	8	8	8	9
MAXIMUM :	0.0830	16.00	4.00	39.44	500.70	60.00	8.00
MINIMUM :	0.0020	5.00	0.50	18.33	81.70	13.34	1.00
RANGE :	0.0810	11.00	3.50	21.11	419.00	46.66	7.00
ARITH. MEAN :	0.0227	9.89	1.61	27.04	248.69	33.34	4.67
ARITH. STD. DEV :	0.0213	3.30	1.24	6.23	144.81	14.55	2.55
GEOM. MEAN :	0.0158	9.37	1.22	26.44	213.59	30.40	3.86
GEOM. STD. DEV. :	2.5776	1.43	2.23	1.25	1.82	1.61	2.06
1ST QUARTILE :	0.0105	7.00	0.50	23.47	147.70	23.07	2.00
2ND QUARTILE :	0.0175	10.00	1.00	26.70	203.55	33.14	4.50
3RD QUARTILE :	0.0290	11.00	2.00	29.11	352.30	40.47	6.50
VOL. WGT. MEAN :	0.0198	9.45	1.38	25.64	236.38	30.20	4.23

	ALUMINUM	COPPER	CADMIUM
	UG/L	UG/L	UG/L
# OF SAMPLES :	8	8	9
MAXIMUM :	562.60	28.59	0.50
MINIMUM :	78.36	5.14	0.05
RANGE :	484.24	23.44	0.45
ARITH. MEAN :	220.48	14.00	0.20
ARITH. STD. DEV :	154.30	8.38	0.14
GEOM. MEAN :	185.79	11.96	0.16
GEOM. STD. DEV. :	1.82	1.83	2.17
1ST QUARTILE :	130.00	7.42	0.07
2ND QUARTILE :	171.80	11.67	0.20
3RD QUARTILE :	259.65	20.03	0.20
VOL. WGT. MEAN :	207.60	13.62	0.18

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY  
-----

STATION NAME : HANMER/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4,83 TO JAN 3,84

PAGE : 1

	PRECIP. MM	CONDUCT. UMHO/CM	PH LAB	FREE H+ LAB MG/L	TOTAL H+ GRAN MG/L	SULPHATE MG/L	NITRATE AS N MG/L
# OF SAMPLES :	13	10	11	11	11	11	12
MAXIMUM :	113.0	98.0	7.66	0.1585	0.2110	10.10	1.180
MINIMUM :	16.1	38.4	3.80	0.0000	0.0758	3.25	0.020
RANGE :	96.9	59.6	3.86	0.1585	0.1352	6.85	1.160
ARITH. MEAN :	50.1	56.8	4.39	0.0827	0.1325	5.03	0.622
ARITH. STD. DEV :	29.8	20.9	1.09	0.0414	0.0406	1.89	0.351
GEOM. MEAN :	42.0	54.0	4.30	0.0405	0.1271	4.79	0.459
GEOM. STD. DEV. :	1.9	1.4	1.21	12.4069	1.3528	1.37	2.985
1ST QUARTILE :	22.0	41.3	3.94	0.0532	0.0963	3.63	0.355
2ND QUARTILE :	42.7	49.8	4.06	0.0832	0.1235	4.73	0.675
3RD QUARTILE :	63.4	57.0	4.19	0.0978	0.1495	5.13	0.805
VOL. WGT. MEAN :	*****	57.9	*****	0.0715	0.1234	4.89	0.471

	CALCIUM MG/L	CHLORIDE MG/L	KJELDAHL AS N MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L
# OF SAMPLES :	11	12	12	11	11	11	10
MAXIMUM :	0.480	1.100	11.500	0.145	2.910	0.845	0.960
MINIMUM :	0.110	0.000	0.310	0.015	0.008	0.015	0.264
RANGE :	0.370	1.100	11.190	0.130	2.902	0.830	0.696
ARITH. MEAN :	0.245	0.397	1.589	0.053	0.326	0.300	0.438
ARITH. STD. DEV :	0.095	0.369	3.156	0.039	0.858	0.321	0.212
GEOM. MEAN :	0.230	0.323	0.744	0.044	0.071	0.133	0.404
GEOM. STD. DEV. :	1.449	2.601	2.768	1.899	4.543	4.471	1.488
1ST QUARTILE :	0.175	0.105	0.410	0.027	0.027	0.027	0.297
2ND QUARTILE :	0.235	0.260	0.490	0.040	0.050	0.085	0.363
3RD QUARTILE :	0.245	0.690	1.050	0.052	0.120	0.580	0.450
VOL. WGT. MEAN :	0.228	0.284	1.839	0.051	0.385	0.215	0.414

\*\*\*\*\* : INSUFFICIENT DATA OR NOT APPLICABLE  
NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY  
-----

STATION NAME : HANMER/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4,83 TO JAN 3,84

PAGE : 2

	PHOSPHOR	MANGANESE	NICKEL	ZINC	IRON	LEAD	VANADIUM
	MG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
# OF SAMPLES :	12	12	12	11	11	11	12
MAXIMUM :	1.1900	37.00	45.00	128.30	1784.00	32.24	2.00
MINIMUM :	0.0010	2.00	1.00	5.16	38.59	5.24	1.00
RANGE :	1.1890	35.00	44.00	123.14	1745.41	27.00	1.00
ARITH. MEAN :	0.1219	7.42	8.83	38.43	277.84	15.80	1.08
ARITH. STD. DEV :	0.3375	9.65	11.76	46.11	510.34	8.30	0.29
GEOM. MEAN :	0.0196	4.98	5.51	19.90	129.07	13.86	1.06
GEOM. STD. DEV. :	5.8130	2.25	2.61	3.33	2.98	1.73	1.22
1ST QUARTILE :	0.0080	3.00	3.00	6.05	60.49	8.40	1.00
2ND QUARTILE :	0.0165	4.00	6.50	12.28	88.23	13.02	1.00
3RD QUARTILE :	0.0475	7.50	8.50	47.36	186.85	20.52	1.00
VOL. WGT. MEAN :	0.1508	5.14	6.66	28.92	158.78	12.63	1.03
	ALUMINUM	COPPER	CADMIUM				
	UG/L	UG/L	UG/L				
# OF SAMPLES :	11	11	12				
MAXIMUM :	731.30	68.85	2.80				
MINIMUM :	31.69	3.45	0.10				
RANGE :	699.61	65.40	2.70				
ARITH. MEAN :	150.59	15.81	0.86				
ARITH. STD. DEV :	209.35	18.20	0.93				
GEOM. MEAN :	90.31	11.18	0.56				
GEOM. STD. DEV. :	2.52	2.21	2.55				
1ST QUARTILE :	46.87	5.27	0.40				
2ND QUARTILE :	61.58	10.85	0.50				
3RD QUARTILE :	98.42	15.03	0.75				
VOL. WGT. MEAN :	95.88	13.10	0.54				

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

---

STATION NAME : LIVELY/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4,83 TO JAN 3,84

PAGE : 1

	PRECIP.	CONDUCT.	PH	FREE H+	TOTAL H+	SULPHATE	NITRATE
	MM	UMHO/CM	LAB	LAB MG/L	GRAN MG/L	MG/L	AS N MG/L
# OF SAMPLES :	13	9	11	11	10	11	11
MAXIMUM :	135.0	54.2	4.53	0.1380	0.1290	6.25	0.920
MINIMUM :	22.0	20.9	3.86	0.0295	0.0472	1.15	0.260
RANGE :	113.0	33.3	0.67	0.1085	0.0818	5.10	0.660
ARITH. MEAN :	71.4	34.3	4.27	0.0616	0.0820	3.30	0.454
ARITH. STD. DEV :	36.8	12.2	0.23	0.0348	0.0288	1.44	0.182
GEOM. MEAN :	62.2	32.4	4.26	0.0539	0.0778	2.99	0.427
GEOM. STD. DEV. :	1.8	1.4	1.06	1.7028	1.4079	1.62	1.427
1ST QUARTILE :	40.9	22.7	4.03	0.0302	0.0588	1.90	0.310
2ND QUARTILE :	59.0	30.6	4.27	0.0432	0.0728	3.25	0.410
3RD QUARTILE :	87.2	37.8	4.45	0.0829	0.0943	3.80	0.505
VOL. WGT. MEAN :	*****	32.4	*****	0.0553	0.0763	3.09	0.417
	CALCIUM	CHLORIDE	KJELDAHL	MAGNESIM	POTASSIM	SODIUM	AMMONIUM
	MG/L	MG/L	AS N MG/L	MG/L	MG/L	MG/L	AS N MG/L
# OF SAMPLES :	10	11	11	10	10	10	11
MAXIMUM :	0.410	1.080	1.090	0.085	0.060	0.825	0.960
MINIMUM :	0.070	0.060	0.130	0.000	0.015	0.015	0.088
RANGE :	0.340	1.020	0.960	0.085	0.045	0.810	0.872
ARITH. MEAN :	0.188	0.330	0.489	0.030	0.029	0.221	0.422
ARITH. STD. DEV :	0.098	0.320	0.279	0.022	0.015	0.249	0.244
GEOM. MEAN :	0.168	0.215	0.419	0.043	0.026	0.106	0.357
GEOM. STD. DEV. :	1.651	2.699	1.828	1.800	1.606	4.260	1.897
1ST QUARTILE :	0.120	0.070	0.260	0.017	0.017	0.017	0.249
2ND QUARTILE :	0.170	0.190	0.395	0.030	0.022	0.163	0.333
3RD QUARTILE :	0.210	0.420	0.630	0.032	0.035	0.297	0.575
VOL. WGT. MEAN :	0.183	0.257	0.421	0.031	0.029	0.163	0.353

\*\*\*\*\* : INSUFFICIENT DATA OR NOT APPLICABLE  
NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY  
-----

STATION NAME : LIVELY/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4,83 TO JAN 3,84

PAGE : 2

	PHOSPHOR	MANGANSE	NICKEL	ZINC	IRON	LEAD	VANADIUM
	MG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
# OF SAMPLES :	11	11	11	11	11	11	11
MAXIMUM :	0.0280	17.00	82.00	13.82	2952.00	23.94	3.00
MINIMUM :	0.0005	1.00	0.50	4.33	39.82	7.20	1.00
RANGE :	0.0275	16.00	81.50	9.49	2912.18	16.74	2.00
ARITH. MEAN :	0.0120	4.00	15.41	7.51	390.52	11.41	1.18
ARITH. STD. DEV. :	0.0084	4.71	24.44	3.04	855.54	5.68	0.60
GEOM. MEAN :	0.0082	2.71	4.96	7.05	137.73	10.40	1.11
GEOM. STD. DEV. :	3.0818	2.30	5.77	1.44	3.56	1.54	1.39
1ST QUARTILE :	0.0040	1.50	0.50	5.24	44.33	7.45	1.00
2ND QUARTILE :	0.0105	2.00	7.00	6.19	114.00	8.22	1.00
3RD QUARTILE :	0.0170	3.00	12.00	8.01	214.70	14.50	1.00
VOL. WGT. MEAN :	0.0114	3.35	16.65	7.11	352.93	11.77	1.15

	ALUMINUM	COPPER	CADMIUM
	UG/L	UG/L	UG/L
# OF SAMPLES :	11	11	11
MAXIMUM :	1130.00	54.94	1.20
MINIMUM :	14.20	1.88	0.10
RANGE :	1115.80	53.05	1.10
ARITH. MEAN :	162.53	15.45	0.45
ARITH. STD. DEV. :	323.18	18.12	0.34
GEOM. MEAN :	71.68	8.60	0.34
GEOM. STD. DEV. :	3.07	3.12	2.27
1ST QUARTILE :	34.24	2.56	0.15
2ND QUARTILE :	58.36	7.03	0.30
3RD QUARTILE :	101.04	17.29	0.65
VOL. WGT. MEAN :	147.88	19.36	0.47



ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY  
-----

STATION NAME : NORTH DUFFERIN/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4,83 TO JAN 3,84

PAGE : 1

	PRECIP.	CONDUCT.	PH	FREE H+	TOTAL H+	SULPHATE	NITRATE
	MM	UMHO/CM	LAB	LAB	GRAN	MG/L	AS N
				MG/L	MG/L		MG/L
# OF SAMPLES :	13	11	12	12	12	12	12
MAXIMUM :	190.0	55.0	4.47	0.0955	0.1610	6.30	0.820
MINIMUM :	27.0	19.8	4.02	0.0339	0.0593	1.60	0.240
RANGE :	163.0	35.2	0.45	0.0616	0.1017	4.70	0.580
ARITH. MEAN :	76.8	37.5	4.26	0.0572	0.0903	4.09	0.513
ARITH. STD. DEV :	42.3	12.0	0.14	0.0191	0.0280	1.39	0.197
GEOM. MEAN :	67.6	35.7	4.26	0.0544	0.0869	3.83	0.478
GEOM. STD. DEV. :	1.7	1.4	1.03	1.3885	1.3264	1.49	1.496
1ST QUARTILE :	46.0	24.8	4.15	0.0422	0.0711	2.88	0.345
2ND QUARTILE :	70.5	36.6	4.26	0.0544	0.0885	4.42	0.500
3RD QUARTILE :	81.5	45.5	4.38	0.0708	0.0991	4.80	0.665
VOL. WGT. MEAN :	*****	35.1	*****	0.0512	0.0838	4.02	0.472

	CALCIUM	CHLORIDE	KJELDAHL	MAGNESIM	POTASSIM	SODIUM	AMMONIUM
	MG/L	MG/L	AS N	MG/L	MG/L	MG/L	AS N
			MG/L				MG/L
# OF SAMPLES :	12	11	12	12	12	12	13
MAXIMUM :	0.850	0.440	1.230	0.185	0.145	0.160	1.290
MINIMUM :	0.150	0.100	0.170	0.050	0.002	0.015	0.110
RANGE :	0.700	0.340	1.060	0.135	0.142	0.145	1.180
ARITH. MEAN :	0.453	0.225	0.605	0.100	0.053	0.075	0.528
ARITH. STD. DEV :	0.185	0.097	0.316	0.045	0.044	0.047	0.318
GEOM. MEAN :	0.416	0.209	0.526	0.091	0.035	0.061	0.442
GEOM. STD. DEV. :	1.576	1.508	1.780	1.524	3.021	2.023	1.915
1ST QUARTILE :	0.320	0.155	0.380	0.067	0.022	0.045	0.308
2ND QUARTILE :	0.465	0.195	0.520	0.085	0.032	0.055	0.430
3RD QUARTILE :	0.520	0.260	0.850	0.123	0.085	0.103	0.680
VOL. WGT. MEAN :	0.438	0.201	0.649	0.093	0.064	0.066	0.503

\*\*\*\*\* : INSUFFICIENT DATA OR NOT APPLICABLE  
NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY  
-----

STATION NAME : NORTH DUFFERIN/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4,83 TO JAN 3,84

PAGE : 2

	PHOSPHOR	MANGANESE	NICKEL	ZINC	IRON	LEAD	VANADIUM
	MG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
# OF SAMPLES :	12	13	13	12	12	12	13
MAXIMUM :	0.1170	13.00	0.50	14.11	233.70	22.32	2.00
MINIMUM :	0.0040	2.00	0.50	4.48	22.12	3.19	1.00
RANGE :	0.1130	11.00	0.00	9.63	211.58	19.13	1.00
ARITH. MEAN :	0.0209	4.69	0.50	7.65	71.21	8.56	1.08
ARITH. STD. DEV :	0.0316	2.95	0.00	3.03	56.31	5.27	0.28
GEOM. MEAN :	0.0119	4.06	0.50	7.18	59.05	7.42	1.05
GEOM. STD. DEV. :	2.6646	1.72	1.00	1.43	1.80	1.72	1.21
1ST QUARTILE :	0.0055	2.50	0.50	5.49	45.31	5.71	1.00
2ND QUARTILE :	0.0110	4.00	0.50	6.75	52.48	7.51	1.00
3RD QUARTILE :	0.0165	5.00	0.50	9.35	71.85	9.25	1.00
VOL. WGT. MEAN :	0.0324	4.51	0.50	6.80	60.76	6.99	1.08
	ALUMINUM	COPPER	CADMIUM				
	UG/L	UG/L	UG/L				
# OF SAMPLES :	12	12	13				
MAXIMUM :	176.90	3.05	0.10				
MINIMUM :	29.84	0.74	0.05				
RANGE :	147.06	2.31	0.05				
ARITH. MEAN :	61.11	1.34	0.06				
ARITH. STD. DEV :	40.02	0.81	0.02				
GEOM. MEAN :	53.66	1.17	0.06				
GEOM. STD. DEV. :	1.63	1.66	1.30				
1ST QUARTILE :	39.90	0.82	0.05				
2ND QUARTILE :	48.66	0.94	0.05				
3RD QUARTILE :	63.33	1.74	0.05				
VOL. WGT. MEAN :	55.05	1.36	0.06				

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY  
-----

STATION NAME : SOUTH CANFIELD/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4,83 TO DEC 6,83

PAGE : 1

	PRECIP.	CONDUCT.	PH	FREE H+	TOTAL H+	SULPHATE	NITRATE
	MM	UMHO/CM	LAB	LAB MG/L	GRAN MG/L	MG/L	AS N MG/L
# OF SAMPLES :	12	10	12	12	12	11	10
MAXIMUM :	134.0	62.0	6.83	0.0955	0.1520	6.55	1.010
MINIMUM :	30.8	14.1	4.02	0.0001	0.0226	2.40	0.340
RANGE :	103.2	47.9	2.81	0.0954	0.1294	4.15	0.670
ARITH. MEAN :	69.7	42.3	4.40	0.0637	0.0961	4.42	0.560
ARITH. STD. DEV :	31.0	14.4	0.78	0.0280	0.0344	1.36	0.190
GEOM. MEAN :	63.6	39.4	4.35	0.0400	0.0880	4.22	0.536
GEOM. STD. DEV. :	1.6	1.5	1.16	5.9834	1.6434	1.39	1.355
1ST QUARTILE :	41.0	31.6	4.05	0.0462	0.0784	2.95	0.440
2ND QUARTILE :	68.0	43.3	4.16	0.0692	0.0988	4.35	0.495
3RD QUARTILE :	84.0	49.3	4.34	0.0891	0.1165	5.13	0.595
VOL. WGT. MEAN :	*****	42.1	*****	0.0622	0.0957	4.43	0.516
	CALCIUM	CHLORIDE	KJELDAHL	MAGNESIM	POTASSIM	SODIUM	AMMONIUM
	MG/L	MG/L	AS N MG/L	MG/L	MG/L	MG/L	AS N MG/L
# OF SAMPLES :	11	11	12	11	11	11	12
MAXIMUM :	0.870	0.760	1.100	0.295	0.100	0.220	0.770
MINIMUM :	0.250	0.110	0.290	0.065	0.005	0.020	0.244
RANGE :	0.620	0.650	0.810	0.230	0.095	0.200	0.526
ARITH. MEAN :	0.408	0.267	0.641	0.110	0.045	0.096	0.432
ARITH. STD. DEV :	0.168	0.184	0.273	0.065	0.028	0.074	0.169
GEOM. MEAN :	0.385	0.229	0.588	0.099	0.035	0.071	0.402
GEOM. STD. DEV. :	1.395	1.723	1.547	1.538	2.293	2.360	1.489
1ST QUARTILE :	0.295	0.150	0.385	0.070	0.023	0.030	0.270
2ND QUARTILE :	0.355	0.185	0.615	0.092	0.037	0.057	0.460
3RD QUARTILE :	0.440	0.290	0.830	0.113	0.055	0.150	0.540
VOL. WGT. MEAN :	0.381	0.240	0.636	0.096	0.042	0.088	0.417

\*\*\*\*\* : INSUFFICIENT DATA OR NOT APPLICABLE  
NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY  
-----

STATION NAME : SOUTH CANFIELD/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4,83 TO DEC 6,83

PAGE : 2

	PHOSPHOR	MANGANSE	NICKEL	ZINC	IRON	LEAD	VANADIUM
	MG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
# OF SAMPLES :	12	11	11	11	11	11	11
MAXIMUM :	0.1200	6.00	1.00	12.89	93.68	16.89	1.00
MINIMUM :	0.0070	0.50	0.50	4.44	23.43	3.22	1.00
RANGE :	0.1130	5.50	0.50	8.45	70.25	13.67	0.00
ARITH. MEAN :	0.0247	3.77	0.55	6.34	51.09	8.92	1.00
ARITH. STD. DEV :	0.0314	1.51	0.15	2.58	20.73	4.34	0.00
GEOM. MEAN :	0.0167	3.27	0.53	5.98	47.33	8.05	1.00
GEOM. STD. DEV. :	2.2355	1.99	1.23	1.39	1.52	1.61	1.00
1ST QUARTILE :	0.0090	2.50	0.50	4.58	31.91	6.26	1.00
2ND QUARTILE :	0.0160	4.00	0.50	5.20	45.13	7.13	1.00
3RD QUARTILE :	0.0195	4.50	0.50	6.36	61.43	10.38	1.00
VOL. WGT. MEAN :	0.0257	3.72	0.53	5.82	49.16	7.69	1.00

	ALUMINUM	COPPER	CADMIUM
	UG/L	UG/L	UG/L
# OF SAMPLES :	11	11	11
MAXIMUM :	103.30	2.14	0.20
MINIMUM :	24.68	0.76	0.05
RANGE :	78.62	1.38	0.15
ARITH. MEAN :	52.97	1.25	0.07
ARITH. STD. DEV :	23.51	0.50	0.05
GEOM. MEAN :	48.63	1.17	0.06
GEOM. STD. DEV. :	1.54	1.47	1.60
1ST QUARTILE :	33.19	0.80	0.05
2ND QUARTILE :	43.90	0.99	0.05
3RD QUARTILE :	67.40	1.56	0.07
VOL. WGT. MEAN :	52.77	1.26	0.07

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY  
-----

STATION NAME : .TORONTO/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4,83 TO JAN 3,84

PAGE : 1

	PRECIP. MM	CONDUCT. UMHO/CM	PH LAB	FREE H+ LAB MG/L	TOTAL H+ GRAN MG/L	SULPHATE MG/L	NITRATE AS N MG/L
# OF SAMPLES :	13	12	9	9	10	12	12
MAXIMUM :	102.0	64.0	7.26	0.0537	0.1000	8.90	1.270
MINIMUM :	18.0	15.5	4.27	0.0001	0.0161	3.25	0.490
RANGE :	84.0	48.5	2.99	0.0536	0.0839	5.65	0.780
ARITH. MEAN :	56.8	37.5	5.27	0.0197	0.0503	5.98	0.776
ARITH. STD. DEV :	24.4	13.7	1.08	0.0206	0.0296	1.94	0.270
GEOM. MEAN :	51.3	35.1	5.19	0.0053	0.0425	5.69	0.737
GEOM. STD. DEV. :	1.6	1.5	1.21	11.9099	1.8880	1.40	1.388
1ST QUARTILE :	37.0	27.1	4.44	0.0008	0.0205	4.45	0.560
2ND QUARTILE :	53.0	39.6	4.76	0.0126	0.0474	5.95	0.715
3RD QUARTILE :	68.5	44.4	5.43	0.0225	0.0550	7.50	0.985
VOL. WGT. MEAN :	*****	34.5	*****	0.0172	0.0512	5.73	0.727

	CALCIUM MG/L	CHLORIDE MG/L	KJELDAHL AS N MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L
# OF SAMPLES :	12	12	12	12	12	12	12
MAXIMUM :	4.000	7.300	1.450	0.790	0.130	4.550	0.930
MINIMUM :	0.900	0.230	0.290	0.010	0.040	0.050	0.216
RANGE :	3.100	7.070	1.160	0.780	0.090	4.500	0.714
ARITH. MEAN :	2.092	1.648	0.774	0.384	0.067	0.929	0.604
ARITH. STD. DEV :	1.252	2.108	0.358	0.261	0.031	1.362	0.214
GEOM. MEAN :	1.769	0.881	0.692	0.263	0.061	0.328	0.559
GEOM. STD. DEV. :	1.831	3.077	1.677	3.261	1.541	4.734	1.560
1ST QUARTILE :	0.995	0.375	0.495	0.192	0.040	0.090	0.448
2ND QUARTILE :	1.530	0.580	0.765	0.282	0.055	0.248	0.685
3RD QUARTILE :	3.305	2.650	0.945	0.625	0.095	1.665	0.735
VOL. WGT. MEAN :	1.979	1.324	0.739	0.358	0.067	0.725	0.576

\*\*\*\*\* : INSUFFICIENT DATA OR NOT APPLICABLE  
NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY  
-----

STATION NAME : TORONTO/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4,83 TO JAN 3,84

PAGE : 2

	PHOSPHOR	MANGANESE	NICKEL	ZINC	IRON	LEAD	VANADIUM
	MG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
# OF SAMPLES :	12	12	12	12	11	12	12
MAXIMUM :	0.1190	22.00	3.00	308.30	522.60	113.40	3.00
MINIMUM :	0.0100	5.00	0.50	12.68	66.30	22.46	1.00
RANGE :	0.1090	17.00	2.50	295.62	456.30	90.94	2.00
ARITH. MEAN :	0.0267	11.25	0.96	54.17	209.98	48.62	1.17
ARITH. STD. DEV :	0.0298	6.02	0.78	81.52	169.25	28.70	0.58
GEOM. MEAN :	0.0203	9.86	0.77	33.76	160.93	42.18	1.10
GEOM. STD. DEV. :	1.9196	1.71	1.86	2.33	2.10	1.72	1.37
1ST QUARTILE :	0.0135	6.00	0.50	19.75	84.47	24.78	1.00
2ND QUARTILE :	0.0180	9.00	0.50	27.29	116.10	38.70	1.00
3RD QUARTILE :	0.0245	16.00	1.00	45.36	292.45	67.61	1.00
VOL. WGT. MEAN :	0.0277	10.55	0.89	60.65	185.57	44.39	1.07
	ALUMINUM	COPPER	CADMIUM				
	UG/L	UG/L	UG/L				
# OF SAMPLES :	12	12	12				
MAXIMUM :	281.10	23.44	0.80				
MINIMUM :	53.14	1.18	0.10				
RANGE :	227.96	22.26	0.70				
ARITH. MEAN :	133.72	9.41	0.32				
ARITH. STD. DEV :	76.01	6.56	0.20				
GEOM. MEAN :	115.51	7.17	0.27				
GEOM. STD. DEV. :	1.76	2.33	1.88				
1ST QUARTILE :	68.00	4.49	0.20				
2ND QUARTILE :	109.06	8.56	0.25				
3RD QUARTILE :	193.25	11.92	0.40				
VOL. WGT. MEAN :	126.14	8.20	0.30				

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY  
-----

STATION NAME : VILLA NOVA/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4,83 TO JAN 3,84

PAGE : 1

	PRECIP.	CONDUCT.	PH	FREE H+	TOTAL H+	SULPHATE	NITRATE
	MM	UMHO/CM	LAB	LAB	GRAM	MG/L	AS N
				MG/L	MG/L		MG/L
# OF SAMPLES :	13	12	12	12	13	13	13
MAXIMUM :	248.0	55.0	4.44	0.0933	0.1260	5.90	0.790
MINIMUM :	32.0	20.3	4.03	0.0363	0.0321	1.90	0.240
RANGE :	216.0	34.7	0.41	0.0570	0.0939	4.00	0.550
ARITH. MEAN :	80.4	36.5	4.24	0.0598	0.0817	3.96	0.504
ARITH. STD. DEV :	55.3	10.9	0.13	0.0177	0.0245	1.02	0.179
GEOM. MEAN :	69.2	35.0	4.24	0.0575	0.0777	3.82	0.472
GEOM. STD. DEV. :	1.7	1.4	1.03	1.3366	1.4203	1.34	1.473
1ST QUARTILE :	49.0	28.1	4.14	0.0462	0.0678	3.30	0.380
2ND QUARTILE :	65.0	36.4	4.25	0.0562	0.0795	3.93	0.490
3RD QUARTILE :	82.0	44.5	4.34	0.0717	0.0952	4.45	0.610
VOL. WGT. MEAN :	*****	35.8	*****	0.0554	0.0823	3.87	0.468
	CALCIUM	CHLORIDE	KJELDAHL	MAGNESIM	POTASSIM	SODIUM	AMMONIUM
	MG/L	MG/L	AS N	MG/L	MG/L	MG/L	AS N
			MG/L				MG/L
# OF SAMPLES :	13	13	13	13	13	13	13
MAXIMUM :	1.140	0.440	0.740	0.245	0.470	0.155	0.670
MINIMUM :	0.230	0.070	0.190	0.045	0.002	0.015	0.010
RANGE :	0.910	0.370	0.550	0.200	0.468	0.140	0.660
ARITH. MEAN :	0.442	0.231	0.518	0.092	0.074	0.075	0.399
ARITH. STD. DEV :	0.228	0.119	0.177	0.050	0.121	0.045	0.211
GEOM. MEAN :	0.406	0.202	0.485	0.083	0.039	0.063	0.285
GEOM. STD. DEV. :	1.490	1.741	1.499	1.525	3.173	1.956	3.236
1ST QUARTILE :	0.320	0.130	0.370	0.062	0.022	0.037	0.275
2ND QUARTILE :	0.390	0.185	0.515	0.080	0.040	0.057	0.386
3RD QUARTILE :	0.465	0.305	0.650	0.092	0.055	0.092	0.530
VOL. WGT. MEAN :	0.408	0.219	0.487	0.082	0.073	0.067	0.376

\*\*\*\*\* : INSUFFICIENT DATA OR NOT APPLICABLE  
NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY  
-----

STATION NAME : VILLA NOVA/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4,83 TO JAN 3,84

PAGE : 2

	PHOSPHOR	MANGANESE	NICKEL	ZINC	IRON	LEAD	VANADIUM
	MG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
# OF SAMPLES :	13	13	13	12	12	12	13
MAXIMUM :	0.0490	7.00	1.00	11.31	96.23	27.94	1.00
MINIMUM :	0.0090	3.00	0.50	5.39	37.22	3.90	1.00
RANGE :	0.0400	4.00	0.50	5.92	59.01	24.04	0.00
ARITH. MEAN :	0.0168	4.69	0.62	6.83	58.31	10.63	1.00
ARITH. STD. DEV :	0.0113	1.25	0.22	2.02	18.69	6.35	0.00
GEOM. MEAN :	0.0147	4.54	0.59	6.61	55.88	9.27	1.00
GEOM. STD. DEV. :	1.6332	1.30	1.36	1.29	1.35	1.72	1.00
1ST QUARTILE :	0.0105	4.00	0.50	5.60	45.29	6.77	1.00
2ND QUARTILE :	0.0125	4.50	0.50	5.97	51.99	9.78	1.00
3RD QUARTILE :	0.0150	5.00	0.50	6.93	65.11	12.38	1.00
VOL. WGT. MEAN :	0.0161	4.40	0.69	6.60	58.31	9.92	1.00

	ALUMINUM	COPPER	CADMIUM
	UG/L	UG/L	UG/L
# OF SAMPLES :	12	12	13
MAXIMUM :	111.80	4.10	0.50
MINIMUM :	30.35	0.70	0.05
RANGE :	81.45	3.40	0.45
ARITH. MEAN :	57.74	1.84	0.12
ARITH. STD. DEV :	22.78	1.16	0.13
GEOM. MEAN :	54.20	1.54	0.08
GEOM. STD. DEV. :	1.44	1.84	2.13
1ST QUARTILE :	44.22	0.90	0.05
2ND QUARTILE :	52.53	1.31	0.05
3RD QUARTILE :	65.91	2.70	0.10
VOL. WGT. MEAN :	58.37	2.04	0.18



PART IV

SUMMARY STATISTICS OF PRECIPITATION CONCENTRATION BY REGION

1983

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY  
-----

STATION NAME : HALDIMAND-NORFOLK REGION(NEMP)/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4,83 TO JAN 3,84

PAGE : 1

	PRECIP. MM	CONDUCT. UMHO/CM	PH LAB	FREE H+ LAB MG/L	TOTAL H+ GRAN MG/L	SULPHATE MG/L	NITRATE AS N MG/L
# OF SAMPLES :	76	66	72	72	73	71	71
MAXIMUM :	248.0	65.0	7.64	0.0955	0.1950	9.30	1.160
MINIMUM :	11.0	14.1	4.02	0.0000	0.0146	1.60	0.240
RANGE :	237.0	50.9	3.62	0.0955	0.1804	7.70	0.920
ARITH. MEAN :	74.2	38.4	4.36	0.0559	0.0865	4.28	0.564
ARITH. STD. DEV :	42.3	12.2	0.53	0.0234	0.0346	1.43	0.206
GEOM. MEAN :	64.3	36.3	4.34	0.0435	0.0787	4.04	0.529
GEOM. STD. DEV. :	1.7	1.4	1.10	3.4118	1.6112	1.42	1.436
1ST QUARTILE :	42.8	28.0	4.14	0.0417	0.0645	3.13	0.385
2ND QUARTILE :	69.5	37.9	4.27	0.0543	0.0857	4.22	0.535
3RD QUARTILE :	86.5	46.8	4.38	0.0716	0.1060	4.97	0.660
VOL. WGT. MEAN :	*****	37.0	*****	0.0534	0.0865	4.23	0.514

	CALCIUM MG/L	CHLORIDE MG/L	KJELDAHL AS N MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L
# OF SAMPLES :	71	71	74	71	70	71	74
MAXIMUM :	2.200	1.760	3.250	0.720	0.685	0.575	1.430
MINIMUM :	0.150	0.060	0.170	0.030	0.000	0.000	0.010
RANGE :	2.050	1.700	3.080	0.690	0.685	0.575	1.420
ARITH. MEAN :	0.494	0.284	0.722	0.121	0.066	0.096	0.512
ARITH. STD. DEV :	0.303	0.242	0.542	0.101	0.106	0.097	0.312
GEOM. MEAN :	0.437	0.231	0.598	0.100	0.042	0.074	0.402
GEOM. STD. DEV. :	1.596	1.830	1.808	1.787	2.559	2.150	2.354
1ST QUARTILE :	0.325	0.155	0.415	0.070	0.025	0.040	0.292
2ND QUARTILE :	0.430	0.210	0.615	0.090	0.040	0.067	0.460
3RD QUARTILE :	0.520	0.320	0.810	0.123	0.060	0.110	0.650
VOL. WGT. MEAN :	0.445	0.255	0.661	0.104	0.066	0.083	0.479

\*\*\*\*\* : INSUFFICIENT DATA OR NOT APPLICABLE  
NOTE(1): PRECIP. VALUES REPRESENT GAUGE EPTH

1  
23  
1

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY  
-----

STATION NAME : HALDIMAND-NORFOLK REGION(NEMP)/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4,83 TO JAN 3,84

PAGE : 2

	PHOSPHOR	MANGANSE	NICKEL	ZINC	IRON	LEAD	VANADIUM
	MG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
# OF SAMPLES :	73	73	73	68	68	68	73
MAXIMUM :	0.1280	36.00	1.00	43.10	261.10	33.50	2.00
MINIMUM :	0.0040	0.50	0.50	3.69	22.12	0.69	1.00
RANGE :	0.1240	35.50	0.50	39.41	238.98	32.80	1.00
ARITH. MEAN :	0.0214	5.92	0.54	8.88	71.59	10.16	1.01
ARITH. STD. DEV :	0.0245	4.80	0.14	6.09	48.53	6.06	0.12
GEOM. MEAN :	0.0153	4.88	0.53	7.76	61.18	8.55	1.01
GEOM. STD. DEV. :	2.0803	1.83	1.21	1.60	1.71	1.88	1.08
1ST QUARTILE :	0.0100	4.00	0.50	5.55	45.29	6.25	1.00
2ND QUARTILE :	0.0140	5.00	0.50	6.77	56.50	8.38	1.00
3RD QUARTILE :	0.0195	6.00	0.50	10.52	80.74	13.23	1.00
VOL. WGT. MEAN :	0.0213	5.17	0.55	7.72	62.89	9.08	1.01

	ALUMINUM	COPPER	CADMIUM
	UG/L	UG/L	UG/L
# OF SAMPLES :	68	68	73
MAXIMUM :	241.60	7.05	0.50
MINIMUM :	22.93	0.69	0.05
RANGE :	218.67	6.36	0.45
ARITH. MEAN :	65.15	1.66	0.08
ARITH. STD. DEV :	38.86	1.06	0.07
GEOM. MEAN :	57.11	1.43	0.07
GEOM. STD. DEV. :	1.64	1.70	1.70
1ST QUARTILE :	41.49	0.87	0.05
2ND QUARTILE :	54.90	1.37	0.05
3RD QUARTILE :	76.24	2.20	0.10
VOL. WGT. MEAN :	60.96	1.57	0.09

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY  
-----

STATION NAME : SUDBURY REGION/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4,83 TO JAN 3,84

PAGE : 1

	PRECIP.	CONDUCT.	PH	FREE H+	TOTAL H+	SULPHATE	NITRATE
	MM	UMHO/CM	LAB	LAB	GRAN	MG/L	AS N
				MG/L	MG/L		MG/L
# OF SAMPLES :	38	30	34	34	33	34	35
MAXIMUM :	135.0	122.0	7.66	0.2138	0.2730	14.20	1.230
MINIMUM :	16.1	18.5	3.67	0.0000	0.0447	1.15	0.020
RANGE :	118.9	103.5	3.99	0.2138	0.2283	13.05	1.210
ARITH. MEAN :	60.7	45.7	4.28	0.0729	0.1076	4.22	0.557
ARITH. STD. DEV :	34.7	23.1	0.64	0.0428	0.0490	2.41	0.297
GEOM. MEAN :	51.3	41.3	4.25	0.0520	0.0986	3.76	0.468
GEOM. STD. DEV. :	1.8	1.6	1.12	4.3310	1.5189	1.60	2.046
1ST QUARTILE :	31.4	31.4	4.03	0.0422	0.0755	2.75	0.350
2ND QUARTILE :	52.6	39.2	4.19	0.0638	0.0963	3.55	0.465
3RD QUARTILE :	77.9	50.5	4.36	0.0912	0.1280	4.80	0.745
VOL. WGT. MEAN :	*****	41.6	*****	0.0619	0.0950	3.80	0.458
	CALCIUM	CHLORIDE	KJELDAHL	MAGNESIM	POTASSIM	SODIUM	AMMONIUM
	MG/L	MG/L	AS N	MG/L	MG/L	MG/L	AS N
			MG/L				MG/L
# OF SAMPLES :	33	35	35	33	33	33	33
MAXIMUM :	0.630	1.310	11.500	0.145	2.910	1.150	1.450
MINIMUM :	0.070	0.000	0.130	0.000	0.008	0.010	0.088
RANGE :	0.560	1.310	11.370	0.145	2.902	1.140	1.362
ARITH. MEAN :	0.211	0.370	0.883	0.040	0.133	0.271	0.439
ARITH. STD. DEV :	0.119	0.371	1.891	0.034	0.500	0.321	0.271
GEOM. MEAN :	0.185	0.257	0.522	0.043	0.039	0.118	0.379
GEOM. STD. DEV. :	1.652	2.555	2.195	1.863	3.069	4.174	1.721
1ST QUARTILE :	0.125	0.100	0.325	0.020	0.020	0.032	0.277
2ND QUARTILE :	0.195	0.225	0.470	0.030	0.030	0.103	0.354
3RD QUARTILE :	0.240	0.435	0.680	0.040	0.060	0.337	0.510
VOL. WGT. MEAN :	0.191	0.269	0.827	0.037	0.129	0.182	0.383

\*\*\*\*\* : INSUFFICIENT DATA OR NOT APPLICABLE  
NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY  
-----

STATION NAME : SUDBURY REGION/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4,83 TO JAN 3,84

PAGE : 2

	PHOSPHOR	MANGANESE	NICKEL	ZINC	IRON	LEAD	VANADIUM
	MG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
# OF SAMPLES :	35	35	35	33	33	33	35
MAXIMUM :	1.1900	37.00	82.00	128.30	2952.00	32.24	3.00
MINIMUM :	0.0005	1.00	0.50	4.29	30.80	5.24	1.00
RANGE :	1.1895	36.00	81.50	124.01	2921.20	27.00	2.00
ARITH. MEAN :	0.0492	4.80	8.59	18.02	249.04	12.52	1.09
ARITH. STD. DEV :	0.1994	6.59	16.00	29.84	572.86	6.78	0.37
GEOM. MEAN :	0.0104	3.12	2.88	9.98	104.68	11.07	1.05
GEOM. STD. DEV. :	4.1100	2.31	4.53	2.47	2.89	1.63	1.24
1ST QUARTILE :	0.0050	2.00	0.50	5.58	47.43	7.49	1.00
2ND QUARTILE :	0.0095	3.00	3.00	6.98	88.23	8.84	1.00
3RD QUARTILE :	0.0200	4.00	8.50	12.45	149.95	17.31	1.00
VOL. WGT. MEAN :	0.0495	3.51	8.74	12.79	206.16	10.91	1.07
	ALUMINUM	COPPER	CADMIUM				
	UG/L	UG/L	UG/L				
# OF SAMPLES :	33	33	35				
MAXIMUM :	1130.00	68.85	2.80				
MINIMUM :	14.20	0.80	0.05				
RANGE :	1115.80	68.05	2.75				
ARITH. MEAN :	121.30	11.94	0.50				
ARITH. STD. DEV :	221.74	15.73	0.64				
GEOM. MEAN :	66.03	6.46	0.29				
GEOM. STD. DEV. :	2.50	3.04	3.00				
1ST QUARTILE :	36.59	2.59	0.10				
2ND QUARTILE :	57.82	5.65	0.30				
3RD QUARTILE :	90.36	12.91	0.60				
VOL. WGT. MEAN :	101.29	12.41	0.38				

PART V

SUMMARY STATISTICS OF WET DEPOSITION BY STATION

1983

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

---

STATION NAME : BINBROOK/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4, 83 TO JAN 3,84

PAGE : 1

	PRECIP. MM	FREE H+ LAB MG/M**2	TOTAL H+ TO PH8.3 MG/M**2	SULPHATE MG/M**2	NITRATE AS N MG/M**2	CALCIUM MG/M**2	CHLORIDE MG/M**2
# OF SAMPLES :	13	11	11	11	11	10	11
MAXIMUM :	160.0	10.0953	18.2400	864.00	86.400	67.600	98.560
MINIMUM :	11.0	0.1868	0.7194	108.07	20.116	22.470	13.650
RANGE :	149.0	9.9085	17.5206	755.93	66.284	45.130	84.910
ARITH. MEAN :	66.8	3.6849	6.2380	355.96	44.454	49.523	30.622
ARITH. STD. DEV :	38.8	2.7686	4.6657	220.14	18.455	14.917	26.483
GEOM. MEAN :	55.4	2.5871	4.7740	302.20	41.270	47.090	24.119
GEOM. STD. DEV. :	2.0	2.8838	2.3178	1.83	1.498	1.426	1.945
1ST QUARTILE :	38.7	1.5853	2.9218	168.26	29.790	38.070	14.228
2ND QUARTILE :	64.0	2.8002	4.9966	278.97	39.265	49.266	16.685
3RD QUARTILE :	75.6	5.0329	7.6442	411.77	55.060	57.285	33.806
VOL. WGT. MEAN :	*****	3.4877	5.9042	318.44	39.769	43.225	27.395

	KJELDAHL AS N MG/M**2	MAGNESIUM MG/M**2	POTASSIUM MG/M**2	SODIUM MG/M**2	AMMONIUM AS N MG/M**2	PHOSPHOR MG/M**2	MANGANESE MG/M**2
# OF SAMPLES :	12	10	10	10	11	12	11
MAXIMUM :	100.100	21.450	9.100	38.570	92.300	2.6320	0.8280
MINIMUM :	13.804	6.634	0.749	1.890	3.248	0.4494	0.1926
RANGE :	86.296	14.816	8.351	36.680	89.052	2.1826	0.6354
ARITH. MEAN :	43.737	13.452	4.162	11.104	36.664	1.2700	0.5819
ARITH. STD. DEV :	24.056	4.193	2.625	11.510	26.060	0.6439	0.2204
GEOM. MEAN :	38.387	12.801	3.235	7.573	27.689	1.1370	0.5356
GEOM. STD. DEV. :	1.714	1.413	2.296	2.430	2.443	1.6363	1.5823
1ST QUARTILE :	30.048	9.940	1.329	4.255	18.459	0.8788	0.3730
2ND QUARTILE :	38.940	13.760	4.777	6.262	25.875	1.1200	0.5470
3RD QUARTILE :	49.867	15.214	5.180	10.280	45.581	1.4329	0.8060
VOL. WGT. MEAN :	42.120	11.741	3.633	9.692	32.800	1.2231	0.5508

\*\*\*\*\* : INSUFFICIENT DATA

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

NOTE(2): THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION (SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

---

STATION NAME : BINBROOK/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4, 83 TO JAN 3,84

PAGE : 2

	NICKEL	ZINC	IRON	LEAD	VANADIUM	ALUMINUM	COPPER
	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2
# OF SAMPLES :	11	10	10	10	11	10	10
MAXIMUM :	0.0800	1.281	16.4493	1.2441	0.160	15.221	0.2640
MINIMUM :	0.0107	0.432	2.0717	0.2772	0.011	1.225	0.0483
RANGE :	0.0693	0.849	14.3776	0.9669	0.149	13.996	0.2158
ARITH. MEAN :	0.0358	0.714	6.4505	0.7162	0.071	6.201	0.1118
ARITH. STD. DEV :	0.0198	0.244	4.6379	0.3313	0.041	4.546	0.0669
GEOM. MEAN :	0.0306	0.682	5.2349	0.6423	0.058	4.790	0.0972
GEOM. STD. DEV. :	1.8512	1.371	1.9565	1.6654	2.121	2.209	1.7222
1ST QUARTILE :	0.0158	0.512	2.7350	0.3819	0.031	2.594	0.0578
2ND QUARTILE :	0.0335	0.682	5.0233	0.7215	0.067	5.116	0.0861
3RD QUARTILE :	0.0408	0.761	7.0605	0.9116	0.082	6.961	0.1370
VOL. WGT. MEAN :	0.0339	0.675	6.0922	0.6764	0.067	5.856	0.1056

CADMIUM

MG/M\*\*2

# OF SAMPLES :	11
MAXIMUM :	0.00800
MINIMUM :	0.00220
RANGE :	0.00580
ARITH. MEAN :	0.00445
ARITH. STD. DEV :	0.00165
GEOM. MEAN :	0.00420
GEOM. STD. DEV. :	1.42669
1ST QUARTILE :	0.00330
2ND QUARTILE :	0.00408
3RD QUARTILE :	0.00493
VOL. WGT. MEAN :	0.00421



ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

---

STATION NAME : BURWASH/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 5, 83 TO DEC 6,83

PAGE : 1

	PRECIP. MM	FREE H+ LAB MG/M**2	TOTAL H+ TO PH8.3 MG/M**2	SULPHATE MG/M**2	NITRATE AS N MG/M**2	CALCIUM MG/M**2	CHLORIDE MG/M**2
# OF SAMPLES :	12	12	12	12	12	12	12
MAXIMUM :	130.0	7.1440	11.9040	567.30	49.290	24.180	52.650
MINIMUM :	24.0	1.1672	2.0884	91.95	9.800	3.123	2.520
RANGE :	106.0	5.9768	9.8156	475.34	39.490	21.057	50.130
ARITH. MEAN :	60.6	3.7671	5.7458	227.96	29.984	10.419	16.406
ARITH. STD. DEV :	36.6	1.9561	3.0894	146.03	12.957	6.370	14.016
GEOM. MEAN :	51.7	3.2684	5.0046	191.93	26.848	8.557	12.433
GEOM. STD. DEV. :	1.8	1.7986	1.7547	1.83	1.697	1.990	2.183
1ST QUARTILE :	31.3	2.3149	3.5211	113.95	20.295	4.305	7.860
2ND QUARTILE :	45.8	3.6196	5.1269	170.76	30.130	10.020	12.280
3RD QUARTILE :	86.8	4.7775	7.1202	331.05	41.352	14.710	17.990
VOL. WGT. MEAN :	*****	3.7671	5.7457	227.96	29.984	10.419	16.406

	KJELDAHL AS N MG/M**2	MAGNESIM MG/M**2	POTASSIM MG/M**2	SODIUM MG/M**2	AMMONIUM AS N MG/M**2	PHOSPHOR MG/M**2	MANGANSE MG/M**2
# OF SAMPLES :	12	12	12	12	12	12	12
MAXIMUM :	67.890	6.510	5.580	40.500	65.100	1.8515	0.2880
MINIMUM :	8.664	0.000	0.260	0.980	6.931	0.0132	0.0405
RANGE :	59.226	6.510	5.320	39.520	58.169	1.8382	0.2475
ARITH. MEAN :	28.199	1.977	2.301	10.773	23.967	0.6116	0.1437
ARITH. STD. DEV :	18.810	1.785	1.698	12.420	16.499	0.5271	0.0965
GEOM. MEAN :	23.098	1.583	1.616	6.039	19.652	0.3541	0.1144
GEOM. STD. DEV. :	1.936	2.066	2.657	3.178	1.929	3.9412	2.0600
1ST QUARTILE :	15.177	0.689	0.750	2.855	12.489	0.2152	0.0647
2ND QUARTILE :	19.400	1.325	2.400	6.260	17.742	0.5370	0.1020
3RD QUARTILE :	41.965	2.832	3.510	12.645	32.534	0.9330	0.2490
VOL. WGT. MEAN :	28.199	1.977	2.301	10.773	23.967	0.6116	0.1437

\*\*\*\*\* : INSUFFICIENT DATA

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

NOTE(2): THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION (SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY  
-----

STATION NAME : BURWASH/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 5, 83 TO DEC 6,83

PAGE : 2

	NICKEL	ZINC	IRON	LEAD	VANADIUM	ALUMINUM	COPPER
	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2
# OF SAMPLES :	12	11	11	11	12	11	11
MAXIMUM :	0.3600	0.688	12.1380	0.8748	0.130	12.650	0.5652
MINIMUM :	0.0140	0.195	1.2388	0.2271	0.024	1.057	0.0388
RANGE :	0.3460	0.493	10.8992	0.6477	0.106	11.593	0.5264
ARITH. MEAN :	0.0913	0.406	4.2017	0.5264	0.061	3.073	0.2157
ARITH. STD. DEV :	0.1269	0.178	3.1541	0.1902	0.037	3.289	0.1905
GEOM. MEAN :	0.0474	0.371	3.3739	0.4926	0.052	2.326	0.1465
GEOM. STD. DEV. :	2.9991	1.571	1.9879	1.4874	1.795	1.974	2.5850
1ST QUARTILE :	0.0215	0.231	1.6425	0.3534	0.031	1.371	0.0549
2ND QUARTILE :	0.0351	0.346	3.4059	0.5074	0.046	2.063	0.1442
3RD QUARTILE :	0.0790	0.527	4.7215	0.6304	0.087	2.560	0.3412
VOL. WGT. MEAN :	0.0913	0.397	4.1090	0.5148	0.061	3.005	0.2109

CADMIUM

MG/M\*\*2

# OF SAMPLES :	12
MAXIMUM :	0.02380
MINIMUM :	0.00173
RANGE :	0.02206
ARITH. MEAN :	0.00929
ARITH. STD. DEV :	0.00752
GEOM. MEAN :	0.00642
GEOM. STD. DEV. :	2.58063
1ST QUARTILE :	0.00255
2ND QUARTILE :	0.00727
3RD QUARTILE :	0.01515
VOL. WGT. MEAN :	0.00929

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

---

STATION NAME : CANBOROUGH/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4, 83 TO JAN 3,84

PAGE : 1

	PRECIP.	FREE H+	TOTAL H+	SULPHATE	NITRATE	CALCIUM	CHLORIDE
	MM	LAB MG/M**2	TO PH8.3 MG/M**2	MG/M**2	AS N MG/M**2	MG/M**2	MG/M**2
# OF SAMPLES :	13	13	13	12	13	13	13
MAXIMUM :	161.0	8.8476	15.9712	893.55	91.770	75.050	49.898
MINIMUM :	19.0	0.0004	0.4408	143.50	21.660	10.250	8.360
RANGE :	142.0	8.8472	15.5304	750.05	70.110	64.800	41.538
ARITH. MEAN :	77.9	3.1329	5.6526	374.53	43.800	36.230	20.360
ARITH. STD. DEV :	38.6	2.1684	3.6260	222.33	18.883	19.665	13.734
GEOM. MEAN :	67.8	1.4549	4.5241	322.52	40.778	31.268	17.163
GEOM. STD. DEV. :	1.8	12.4267	2.2668	1.77	1.463	1.797	1.793
1ST QUARTILE :	45.5	2.1164	3.5624	219.92	32.103	20.450	10.640
2ND QUARTILE :	75.9	2.6443	4.9450	328.50	38.389	31.619	16.015
3RD QUARTILE :	93.5	3.5045	6.4910	476.41	42.660	42.060	20.125
VOL. WGT. MEAN :	*****	3.1329	5.6526	352.32	43.800	36.230	20.360

	KJELDAHL AS N	MAGNESIM	POTASSIM	SODIUM	AMMONIUM AS N	PHOSPHOR	MANGANSE
	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2
# OF SAMPLES :	13	13	12	13	13	12	13
MAXIMUM :	222.370	23.275	65.075	24.131	135.240	7.0300	0.7600
MINIMUM :	29.520	3.280	0.000	0.000	2.164	0.4656	0.1230
RANGE :	192.850	19.995	65.075	24.131	133.076	6.5644	0.6370
ARITH. MEAN :	86.277	9.880	8.612	6.276	56.598	1.7908	0.3482
ARITH. STD. DEV :	58.349	6.037	17.949	6.125	36.917	1.8235	0.1846
GEOM. MEAN :	72.772	8.375	3.632	4.581	42.168	1.2737	0.3067
GEOM. STD. DEV. :	1.788	1.817	3.019	2.051	2.758	2.2802	1.7010
1ST QUARTILE :	51.397	5.141	1.824	2.327	31.627	0.6000	0.2120
2ND QUARTILE :	60.250	7.550	3.181	4.743	48.978	1.1827	0.3011
3RD QUARTILE :	83.460	11.948	6.210	6.437	56.250	2.3430	0.3885
VOL. WGT. MEAN :	86.277	9.880	9.020	6.276	56.598	1.8756	0.3482

\*\*\*\*\* : INSUFFICIENT DATA

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

NOTE(2): THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION (SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

---

STATION NAME : CANBOROUGH/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4, 83 TO JAN 3,84

PAGE : 2

	NICKEL	ZINC	IRON	LEAD	VANADIUM	ALUMINUM	COPPER
	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2
# OF SAMPLES :	13	12	12	12	13	12	12
MAXIMUM :	0.0818	2.828	10.3068	3.3299	0.161	10.372	0.1818
MINIMUM :	0.0095	0.397	1.5097	0.0639	0.019	1.197	0.0550
RANGE :	0.0723	2.431	8.7971	3.2660	0.142	9.176	0.1267
ARITH. MEAN :	0.0421	0.802	4.8859	0.7891	0.078	4.665	0.1028
ARITH. STD. DEV. :	0.0227	0.691	2.5432	0.8672	0.039	2.593	0.0409
GEOM. MEAN :	0.0358	0.653	4.2865	0.5084	0.068	3.965	0.0959
GEOM. STD. DEV. :	1.8959	1.819	1.7338	2.7801	1.808	1.877	1.4682
1ST QUARTILE :	0.0227	0.410	2.9042	0.3396	0.045	2.530	0.0700
2ND QUARTILE :	0.0392	0.531	4.2541	0.5386	0.076	5.056	0.0907
3RD QUARTILE :	0.0486	0.884	6.7210	0.9494	0.093	6.247	0.1279
VOL. WGT. MEAN :	0.0421	0.810	4.9338	0.7969	0.078	4.711	0.1038

CADMIUM

MG/M\*\*2

# OF SAMPLES :	13
MAXIMUM :	0.01202
MINIMUM :	0.00190
RANGE :	0.01012
ARITH. MEAN :	0.00550
ARITH. STD. DEV. :	0.00285
GEOM. MEAN :	0.00492
GEOM. STD. DEV. :	1.62310
1ST QUARTILE :	0.00379
2ND QUARTILE :	0.00447
3RD QUARTILE :	0.00541
VOL. WGT. MEAN :	0.00550

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

---

STATION NAME : DOG'S NEST EAST/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4, 83 TO DEC 6,83

PAGE : 1

	PRECIP. MM	FREE H+ LAB MG/M**2	TOTAL H+ TO PH8.3 MG/M**2	SULPHATE MG/M**2	NITRATE AS N MG/M**2	CALCIUM MG/M**2	CHLORIDE MG/M**2
# OF SAMPLES :	12	12	12	12	12	12	12
MAXIMUM :	214.0	15.5029	25.3804	1080.70	109.140	62.060	56.268
MINIMUM :	30.0	1.8077	3.2520	123.75	17.700	12.000	3.540
RANGE :	184.0	13.6953	22.1284	956.95	91.440	50.060	52.728
ARITH. MEAN :	73.5	4.5032	8.2962	285.17	35.292	25.840	15.721
ARITH. STD. DEV :	50.4	3.6629	7.0722	260.96	24.525	15.686	15.543
GEOM. MEAN :	62.8	3.7648	6.6257	232.35	30.945	22.463	11.045
GEOM. STD. DEV. :	1.7	1.7492	1.8824	1.78	1.610	1.698	2.347
1ST QUARTILE :	42.3	2.7514	4.6151	172.52	25.800	15.480	4.850
2ND QUARTILE :	56.0	3.5030	5.2798	211.47	27.730	20.050	11.700
3RD QUARTILE :	89.5	4.7132	7.8365	256.75	34.010	34.086	15.610
VOL. WGT. MEAN :	*****	4.5032	8.2962	285.17	35.292	25.840	15.721

	KJELDAHL AS N MG/M**2	MAGNESIM MG/M**2	POTASSIM MG/M**2	SODIUM MG/M**2	AMMONIUM AS N MG/M**2	PHOSPHOR MG/M**2	MANGANSE MG/M**2
# OF SAMPLES :	12	12	12	12	12	12	12
MAXIMUM :	100.580	9.630	10.700	11.770	89.880	1.9260	1.2840
MINIMUM :	14.484	1.770	0.521	1.350	9.457	0.3040	0.1180
RANGE :	86.096	7.860	10.179	10.420	80.423	1.6220	1.1660
ARITH. MEAN :	30.999	4.392	2.857	4.821	24.839	0.8340	0.4534
ARITH. STD. DEV :	24.099	2.445	2.755	3.189	21.993	0.5146	0.3818
GEOM. MEAN :	25.959	3.878	2.059	3.874	19.928	0.7108	0.3505
GEOM. STD. DEV. :	1.758	1.661	2.297	2.052	1.874	1.7875	2.0520
1ST QUARTILE :	17.340	2.957	1.000	1.950	12.389	0.4500	0.2450
2ND QUARTILE :	22.648	3.490	2.143	4.627	18.685	0.6255	0.3054
3RD QUARTILE :	35.145	5.584	3.345	6.170	25.885	1.1510	0.4600
VOL. WGT. MEAN :	30.999	4.392	2.857	4.821	24.839	0.8340	0.4534

\*\*\*\*\* : INSUFFICIENT DATA

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

NOTE(2): THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION (SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

1  
3  
1

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

---

STATION NAME : DOG'S NEST EAST/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4, 83 TO DEC 6,83

PAGE : 2

	NICKEL	ZINC	IRON	LEAD	VANADIUM	ALUMINUM	COPPER
	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2
# OF SAMPLES :	12	11	11	11	12	11	11
MAXIMUM :	0.1070	1.540	11.2733	2.9489	0.214	8.067	0.4697
MINIMUM :	0.0150	0.184	1.4892	0.2565	0.030	0.782	0.0466
RANGE :	0.0920	1.356	9.7841	2.6924	0.184	7.285	0.4231
ARITH. MEAN :	0.0367	0.496	4.2796	0.6994	0.073	4.085	0.1299
ARITH. STD. DEV :	0.0252	0.369	2.8003	0.7765	0.050	2.802	0.1180
GEOM. MEAN :	0.0314	0.419	3.6301	0.5219	0.063	3.127	0.1034
GEOM. STD. DEV. :	1.7314	1.766	1.8047	1.9836	1.731	2.259	1.9089
1ST QUARTILE :	0.0211	0.247	2.1916	0.3204	0.042	1.367	0.0562
2ND QUARTILE :	0.0280	0.389	3.3214	0.4496	0.056	2.703	0.0995
3RD QUARTILE :	0.0447	0.527	5.1104	0.5274	0.089	6.379	0.1357
VOL. WGT. MEAN :	0.0367	0.497	4.2876	0.7007	0.073	4.092	0.1301

CADMIUM

MG/M\*\*2

# OF SAMPLES :	12
MAXIMUM :	0.04280
MINIMUM :	0.00150
RANGE :	0.04130
ARITH. MEAN :	0.00749
ARITH. STD. DEV :	0.01176
GEOM. MEAN :	0.00419
GEOM. STD. DEV. :	2.59125
1ST QUARTILE :	0.00219
2ND QUARTILE :	0.00335
3RD QUARTILE :	0.00510
VOL. WGT. MEAN :	0.00749

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

---

STATION NAME : GERMAIN PARK/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4, 83 TO JAN 3,84

PAGE : 1

	PRECIP.	FREE H+	TOTAL H+	SULPHATE	NITRATE	CALCIUM	CHLORIDE
	MM	LAB MG/M**2	TO PH8.3 MG/M**2	MG/M**2	AS N MG/M**2	MG/M**2	MG/M**2
# OF SAMPLES :	13	11	11	12	12	11	12
MAXIMUM :	119.5	1.5415	2.3150	1097.40	116.328	384.975	123.402
MINIMUM :	20.8	0.0008	0.8747	141.65	25.844	62.500	20.520
RANGE :	98.7	1.5407	1.4403	955.75	90.484	322.475	102.882
ARITH. MEAN :	59.5	0.1819	1.4909	558.73	61.679	223.344	44.191
ARITH. STD. DEV :	29.8	0.4667	0.4934	276.10	28.072	102.969	27.464
GEOM. MEAN :	52.7	0.0109	1.4182	486.17	56.202	195.524	39.078
GEOM. STD. DEV. :	1.7	10.1092	1.3932	1.81	1.573	1.809	1.619
1ST QUARTILE :	36.6	0.0023	1.0851	395.14	37.605	104.170	26.667
2ND QUARTILE :	53.1	0.0061	1.1523	532.27	57.235	214.447	37.675
3RD QUARTILE :	66.3	0.0108	1.8693	744.25	71.780	297.847	50.120
VOL. WGT. MEAN :	*****	0.1669	1.3679	530.01	58.509	204.917	41.920

	KJELDAHL AS N MG/M**2	MAGNESIM MG/M**2	POTASSIM MG/M**2	SODIUM MG/M**2	AMMONIUM AS N MG/M**2	PHOSPHOR MG/M**2	MANGANSE MG/M**2
# OF SAMPLES :	12	11	11	11	11	12	9
MAXIMUM :	190.950	88.500	9.735	28.577	100.005	4.7310	1.2600
MINIMUM :	27.993	11.125	1.375	0.000	11.431	0.1770	0.2500
RANGE :	162.957	77.375	8.360	28.577	88.574	4.5540	1.0100
ARITH. MEAN :	68.083	48.425	4.815	12.083	45.207	1.2395	0.6529
ARITH. STD. DEV :	45.621	22.580	2.532	7.797	25.938	1.1955	0.3100
GEOM. MEAN :	58.023	42.265	4.167	9.471	36.763	0.8998	0.5895
GEOM. STD. DEV. :	1.760	1.834	1.816	1.681	1.823	2.3142	1.6307
1ST QUARTILE :	38.162	25.305	2.363	6.525	27.064	0.6189	0.4013
2ND QUARTILE :	53.988	47.736	4.253	9.425	32.368	0.9580	0.6095
3RD QUARTILE :	81.525	60.825	6.237	16.737	60.822	1.3778	0.6855
VOL. WGT. MEAN :	64.584	44.430	4.418	11.086	41.171	1.1758	0.5618

\*\*\*\*\* : INSUFFICIENT DATA

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

NOTE(2): THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION (SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

---

STATION NAME : GERMAIN PARK/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4, 83 TO JAN 3,84

PAGE : 2

	NICKEL	ZINC	IRON	LEAD	VANADIUM	ALUMINUM	COPPER
	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2
# OF SAMPLES :	9	8	8	8	9	8	8
MAXIMUM :	0.2100	3.142	43.7220	4.0435	0.597	32.529	3.0019
MINIMUM :	0.0225	0.986	4.7200	1.0610	0.065	3.052	0.4110
RANGE :	0.1875	2.156	39.0020	2.9825	0.532	29.476	2.5909
ARITH. MEAN :	0.0952	1.776	16.3783	2.0922	0.292	14.384	0.9435
ARITH. STD. DEV :	0.0608	0.757	12.3246	1.0254	0.180	9.843	0.8671
GEOM. MEAN :	0.0768	1.649	13.3173	1.8956	0.243	11.584	0.7454
GEOM. STD. DEV. :	2.0959	1.502	1.9619	1.5989	1.981	2.085	1.9282
1ST QUARTILE :	0.0390	1.221	9.0350	1.2869	0.176	8.594	0.4711
2ND QUARTILE :	0.0825	1.472	12.8499	1.7686	0.195	10.600	0.6307
3RD QUARTILE :	0.1162	2.348	19.4074	2.7611	0.343	20.553	0.9658
VOL. WGT. MEAN :	0.0820	1.524	14.0538	1.7953	0.252	12.343	0.8096

CADMIUM

MG/M\*\*2

# OF SAMPLES :	9
MAXIMUM :	0.03150
MINIMUM :	0.00326
RANGE :	0.02824
ARITH. MEAN :	0.01224
ARITH. STD. DEV :	0.00858
GEOM. MEAN :	0.00991
GEOM. STD. DEV. :	2.02081
1ST QUARTILE :	0.00524
2ND QUARTILE :	0.01062
3RD QUARTILE :	0.01300
VOL. WGT. MEAN :	0.01053



ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

---

STATION NAME : HANMER/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4, 83 TO JAN 3,84

PAGE : 1

	PRECIP. MM	FREE H+ LAB MG/M**2	TOTAL H+ TO PH8.3 MG/M**2	SULPHATE MG/M**2	NITRATE AS N MG/M**2	CALCIUM MG/M**2	CHLORIDE MG/M**2
# OF SAMPLES :	13	11	11	11	12	11	12
MAXIMUM :	113.0	7.4490	14.4720	474.70	37.310	22.560	61.640
MINIMUM :	16.1	0.0015	2.2898	60.90	1.340	3.864	0.000
RANGE :	96.9	7.4475	12.1822	413.80	35.970	18.696	61.640
ARITH. MEAN :	50.1	3.7127	6.6377	254.14	23.233	11.856	13.991
ARITH. STD. DEV :	29.8	2.3278	3.7839	147.64	10.934	6.519	16.466
GEOM. MEAN :	42.0	1.7636	5.6680	208.47	18.732	10.007	8.898
GEOM. STD. DEV. :	1.9	11.1428	1.8308	2.03	2.455	1.906	2.178
1ST QUARTILE :	22.0	1.7206	3.0002	100.24	16.637	4.881	5.232
2ND QUARTILE :	42.7	2.8621	5.4621	212.73	22.152	10.631	8.665
3RD QUARTILE :	63.4	5.3293	8.7135	358.80	34.340	16.685	14.866
VOL. WGT. MEAN :	*****	3.5802	6.4009	245.07	23.614	11.433	14.221

	KJELDAHL AS N MG/M**2	MAGNESIM MG/M**2	POTASSIM MG/M**2	SODIUM MG/M**2	AMMONIUM AS N MG/M**2	PHOSPHOR MG/M**2	MANGANSE MG/M**2
# OF SAMPLES :	12	11	11	11	10	12	12
MAXIMUM :	770.500	9.715	194.970	56.615	45.120	79.7300	0.7400
MINIMUM :	7.830	0.644	0.600	1.410	5.464	0.1130	0.0696
RANGE :	762.670	9.071	194.370	55.205	39.656	79.6170	0.6704
ARITH. MEAN :	90.608	2.663	20.018	11.160	20.900	7.4333	0.2531
ARITH. STD. DEV :	215.204	2.696	58.046	16.034	13.924	22.7838	0.1873
GEOM. MEAN :	30.378	1.897	3.099	5.786	16.857	0.7991	0.2031
GEOM. STD. DEV. :	3.413	2.253	4.633	3.150	2.034	5.9038	2.0069
1ST QUARTILE :	12.000	0.928	0.964	1.985	9.311	0.2118	0.1443
2ND QUARTILE :	27.420	1.590	2.492	3.600	18.165	0.6425	0.2160
3RD QUARTILE :	39.810	2.900	3.405	12.454	26.220	1.5260	0.2705
VOL. WGT. MEAN :	92.096	2.568	19.304	10.762	20.756	7.5553	0.2573

\*\*\*\*\* : INSUFFICIENT DATA

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

NOTE(2): THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION (SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

---

STATION NAME : HANMER/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4, 83 TO JAN 3,84

PAGE : 2

	NICKEL	ZINC	IRON	LEAD	VANADIUM	ALUMINUM	COPPER
	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2
# OF SAMPLES :	12	11	11	11	12	11	11
MAXIMUM :	1.0170	8.161	35.6800	1.3390	0.113	14.626	2.1300
MINIMUM :	0.0495	0.186	1.3892	0.2728	0.016	1.127	0.1593
RANGE :	0.9675	7.975	34.2908	1.0662	0.097	13.499	1.9707
ARITH. MEAN :	0.3282	1.454	7.9821	0.6351	0.051	4.820	0.6588
ARITH. STD. DEV. :	0.3154	2.290	9.6218	0.3181	0.030	3.869	0.6132
GEOM. MEAN :	0.2250	0.817	5.2992	0.5691	0.043	3.708	0.4589
GEOM. STD. DEV. :	2.4849	2.644	2.4369	1.6366	1.849	2.151	2.4389
1ST QUARTILE :	0.1253	0.535	2.5316	0.3384	0.030	1.565	0.1749
2ND QUARTILE :	0.2232	0.603	4.8817	0.5385	0.043	3.725	0.4119
3RD QUARTILE :	0.3715	0.967	7.6482	0.7842	0.069	5.762	0.7608
VOL. WGT. MEAN :	0.3336	1.449	7.9535	0.6328	0.052	4.803	0.6564

CADMIUM

MG/M\*\*2

# OF SAMPLES :	12
MAXIMUM :	0.04872
MINIMUM :	0.00670
RANGE :	0.04202
ARITH. MEAN :	0.02657
ARITH. STD. DEV. :	0.01388
GEOM. MEAN :	0.02306
GEOM. STD. DEV. :	1.79346
1ST QUARTILE :	0.01630
2ND QUARTILE :	0.02327
3RD QUARTILE :	0.04054
VOL. WGT. MEAN :	0.02700

1  
3  
8  
1

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

---

STATION NAME : LIVELY/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4, 83 TO JAN 3,84

PAGE : 1

	PRECIP. MM	FREE H+ LAB MG/M**2	TOTAL H+ TO PH8.3 MG/M**2	SULPHATE MG/M**2	NITRATE AS N MG/M**2	CALCIUM MG/M**2	CHLORIDE MG/M**2
# OF SAMPLES :	13	11	10	11	11	10	11
MAXIMUM :	135.0	7.8124	10.8658	450.00	72.900	26.730	60.750
MINIMUM :	22.0	1.0414	2.3388	38.75	10.120	2.359	3.899
RANGE :	113.0	6.7710	8.5270	411.24	62.780	24.371	56.851
ARITH. MEAN :	71.4	4.2605	6.2198	230.79	31.142	14.603	19.186
ARITH. STD. DEV :	36.8	2.1606	2.7088	127.13	16.809	7.666	16.691
GEOM. MEAN :	62.2	3.7135	5.6758	191.80	27.359	11.980	13.785
GEOM. STD. DEV. :	1.8	1.7952	1.5907	2.04	1.732	2.154	2.384
1ST QUARTILE :	40.9	2.6376	4.2844	100.99	17.037	7.885	5.610
2ND QUARTILE :	59.0	3.2568	5.2480	226.75	28.506	15.100	12.565
3RD QUARTILE :	87.2	6.2732	7.9076	262.07	34.219	16.640	23.663
VOL. WGT. MEAN :	*****	3.9451	5.5513	220.52	29.756	13.033	18.332

	KJELDAHL AS N MG/M**2	MAGNESIM MG/M**2	POTASSIM MG/M**2	SODIUM MG/M**2	AMMONIUM AS N MG/M**2	PHOSPHOR MG/M**2	MANGANSE MG/M**2
# OF SAMPLES :	11	10	10	10	11	11	11
MAXIMUM :	62.920	5.100	4.455	43.875	46.748	1.7550	1.0200
MINIMUM :	10.447	0.000	0.437	1.080	9.301	0.0595	0.0337
RANGE :	52.473	5.100	4.018	42.795	37.447	1.6955	0.9863
ARITH. MEAN :	31.444	2.485	2.303	13.052	26.378	0.8535	0.2503
ARITH. STD. DEV :	18.357	1.682	1.268	13.195	14.205	0.6668	0.2681
GEOM. MEAN :	26.879	2.134	1.861	7.586	22.905	0.5274	0.1740
GEOM. STD. DEV. :	1.808	1.911	2.196	3.335	1.766	3.3415	2.4314
1ST QUARTILE :	15.933	1.045	0.973	2.097	13.627	0.1256	0.0848
2ND QUARTILE :	23.990	2.332	2.321	9.362	19.920	0.6630	0.1960
3RD QUARTILE :	45.225	3.300	2.862	16.394	39.908	1.5177	0.2400
VOL. WGT. MEAN :	30.045	2.218	2.056	11.649	25.204	0.8155	0.2392

\*\*\*\*\* : INSUFFICIENT DATA

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

NOTE(2): THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION (SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

---

STATION NAME : LIVELY/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4, 83 TO JAN 3,84

PAGE : 2

	NICKEL	ZINC	IRON	LEAD	VANADIUM	ALUMINUM	COPPER
	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2
# OF SAMPLES :	11	11	11	11	11	11	11
MAXIMUM :	4.9950	1.071	177.1200	3.2319	0.180	67.800	7.4169
MINIMUM :	0.0110	0.122	0.8760	0.1820	0.022	0.832	0.0610
RANGE :	4.9840	0.949	176.2439	3.0499	0.158	66.968	7.3559
ARITH. MEAN :	1.2442	0.531	26.3701	0.8791	0.086	11.049	1.4468
ARITH. STD. DEV :	1.8751	0.291	51.7684	0.8278	0.050	19.444	2.1806
GEOM. MEAN :	0.3183	0.452	8.8315	0.6667	0.071	4.596	0.5514
GEOM. STD. DEV. :	7.5546	1.895	4.2267	2.1216	1.989	3.685	4.6905
1ST QUARTILE :	0.0436	0.279	3.7308	0.3869	0.031	1.415	0.1151
2ND QUARTILE :	0.4258	0.461	5.2626	0.6093	0.074	3.800	0.5156
3RD QUARTILE :	0.9590	0.672	16.7369	0.9216	0.120	9.815	1.7079
VOL. WGT. MEAN :	1.1888	0.507	25.1964	0.8399	0.082	10.558	1.3824

CADMIUM

MG/M\*\*2

# OF SAMPLES :	11
MAXIMUM :	0.16200
MINIMUM :	0.00337
RANGE :	0.15863
ARITH. MEAN :	0.03487
ARITH. STD. DEV :	0.04407
GEOM. MEAN :	0.02160
GEOM. STD. DEV. :	2.72192
1ST QUARTILE :	0.01045
2ND QUARTILE :	0.01772
3RD QUARTILE :	0.03600
VOL. WGT. MEAN :	0.03332

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

---

STATION NAME : NORTH DUFFERIN/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4, 83 TO JAN 3,84

PAGE : 1

	PRECIP. MM	FREE H+ LAB MG/M**2	TOTAL H+ TO PH8.3 MG/M**2	SULPHATE MG/M**2	NITRATE AS N MG/M**2	CALCIUM MG/M**2	CHLORIDE MG/M**2
# OF SAMPLES :	13	12	12	12	12	12	11
MAXIMUM :	190.0	6.7415	14.2500	921.50	100.700	106.400	28.500
MINIMUM :	27.0	2.1946	2.9160	128.25	20.700	12.900	6.880
RANGE :	163.0	4.5468	11.3340	793.25	80.000	93.500	21.620
ARITH. MEAN :	76.8	4.1245	6.8829	323.60	37.996	35.329	16.290
ARITH. STD. DEV. :	42.3	1.3560	2.8895	217.22	21.393	24.760	6.808
GEOM. MEAN :	67.6	3.9250	6.3919	276.35	34.460	30.002	14.954
GEOM. STD. DEV. :	1.7	1.3917	1.4935	1.75	1.528	1.765	1.564
1ST QUARTILE :	46.0	2.9938	5.1127	190.72	26.650	19.290	9.740
2ND QUARTILE :	70.5	3.9048	6.6068	263.45	33.125	34.125	15.890
3RD QUARTILE :	81.5	5.0299	7.9324	401.35	40.960	38.980	17.990
VOL. WGT. MEAN :	*****	3.9293	6.5571	308.28	36.197	33.657	15.456

	KJELDAHL AS N MG/M**2	MAGNESIM MG/M**2	POTASSIM MG/M**2	SODIUM MG/M**2	AMMONIUM AS N MG/M**2	PHOSPHOR MG/M**2	MANGANSE MG/M**2
# OF SAMPLES :	12	12	12	12	13	12	13
MAXIMUM :	233.700	19.000	27.550	10.815	146.300	22.2300	1.3300
MINIMUM :	14.620	3.185	0.215	1.155	9.460	0.1080	0.1080
RANGE :	219.080	15.815	27.335	9.660	136.840	22.1220	1.2220
ARITH. MEAN :	52.284	7.485	5.147	5.322	38.604	2.6090	0.3462
ARITH. STD. DEV. :	59.393	4.397	7.518	3.147	35.244	6.2065	0.3156
GEOM. MEAN :	37.947	6.597	2.522	4.383	29.876	0.8588	0.2741
GEOM. STD. DEV. :	2.097	1.654	3.589	2.009	2.021	3.6041	1.9182
1ST QUARTILE :	22.805	4.647	1.267	2.692	18.546	0.4935	0.1595
2ND QUARTILE :	37.365	5.575	2.457	4.862	27.668	0.6880	0.2570
3RD QUARTILE :	51.045	9.195	5.905	6.997	39.198	1.1565	0.3535
VOL. WGT. MEAN :	49.809	7.131	4.903	5.070	38.604	2.4855	0.3462

\*\*\*\*\* : INSUFFICIENT DATA

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

NOTE(2): THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION (SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

---

STATION NAME : NORTH DUFFERIN/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4, 83 TO JAN 3,84

PAGE : 2

	NICKEL	ZINC	IRON	LEAD	VANADIUM	ALUMINUM	COPPER
	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2
# OF SAMPLES :	13	12	12	12	13	12	12
MAXIMUM :	0.0950	1.368	10.3246	1.1793	0.190	9.523	0.4948
MINIMUM :	0.0135	0.316	1.4118	0.2993	0.027	0.926	0.0438
RANGE :	0.0815	1.052	8.9128	0.8800	0.163	8.597	0.4510
ARITH. MEAN :	0.0384	0.526	4.7039	0.5413	0.083	4.262	0.1054
ARITH. STD. DEV :	0.0212	0.280	2.8342	0.2456	0.047	2.399	0.1244
GEOM. MEAN :	0.0338	0.484	3.9838	0.5008	0.071	3.620	0.0792
GEOM. STD. DEV. :	1.6956	1.467	1.8402	1.4867	1.775	1.885	1.9122
1ST QUARTILE :	0.0230	0.397	2.8028	0.3676	0.046	2.400	0.0554
2ND QUARTILE :	0.0352	0.430	3.6523	0.4651	0.070	3.895	0.0620
3RD QUARTILE :	0.0407	0.568	6.7237	0.6534	0.094	5.541	0.0957
VOL. WGT. MEAN :	0.0384	0.522	4.6645	0.5368	0.083	4.226	0.1045

CADMIUM

MG/M\*\*2

# OF SAMPLES :	13
MAXIMUM :	0.00950
MINIMUM :	0.00155
RANGE :	0.00795
ARITH. MEAN :	0.00427
ARITH. STD. DEV :	0.00240
GEOM. MEAN :	0.00376
GEOM. STD. DEV. :	1.67881
1ST QUARTILE :	0.00257
2ND QUARTILE :	0.00353
3RD QUARTILE :	0.00450
VOL. WGT. MEAN :	0.00427

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

---

STATION NAME : SOUTH CANFIELD/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4, 83 TO DEC 6,83

PAGE : 1

	PRECIP. MM	FREE H+ LAB MG/M**2	TOTAL H+ TO PH8.3 MG/M**2	SULPHATE MG/M**2	NITRATE AS N MG/M**2	CALCIUM MG/M**2	CHLORIDE MG/M**2
# OF SAMPLES :	12	12	12	11	10	11	11
MAXIMUM :	134.0	12.7969	20.4216	844.20	54.650	48.240	34.976
MINIMUM :	30.8	0.0120	2.1546	133.25	17.550	11.700	5.850
RANGE :	103.2	12.7849	18.2670	710.95	37.100	36.540	29.126
ARITH. MEAN :	69.7	4.3393	6.8002	303.75	32.025	26.156	16.483
ARITH. STD. DEV. :	31.0	3.1899	4.7409	200.51	9.538	11.117	8.940
GEOM. MEAN :	63.6	2.5433	5.7826	262.67	30.854	23.971	14.244
GEOM. STD. DEV. :	1.6	5.7833	1.7662	1.71	1.332	1.568	1.799
1ST QUARTILE :	41.0	2.8238	4.0108	158.23	26.480	14.555	6.980
2ND QUARTILE :	68.0	3.4222	5.7567	248.65	31.479	25.160	15.245
3RD QUARTILE :	84.0	5.5422	8.1195	343.62	32.816	31.887	22.234
VOL. WGT. MEAN :	*****	4.3393	6.8002	308.70	35.975	26.582	16.751

	KJELDAHL AS N MG/M**2	MAGNESIUM MG/M**2	POTASSIUM MG/M**2	SODIUM MG/M**2	AMMONIUM AS N MG/M**2	PHOSPHOR MG/M**2	MANGANESE MG/M**2
# OF SAMPLES :	12	11	11	11	12	12	11
MAXIMUM :	90.200	9.720	8.100	15.302	67.000	9.8400	0.5360
MINIMUM :	15.170	2.870	0.546	1.300	10.906	0.4312	0.0205
RANGE :	75.030	6.850	7.554	14.002	56.094	9.4088	0.5155
ARITH. MEAN :	44.374	6.586	2.912	6.041	29.080	1.7903	0.2551
ARITH. STD. DEV. :	26.499	2.321	2.209	4.721	15.854	2.6633	0.1410
GEOM. MEAN :	37.450	6.173	2.178	4.401	25.592	1.0624	0.2035
GEOM. STD. DEV. :	1.853	1.481	2.343	2.401	1.696	2.4755	2.3754
1ST QUARTILE :	20.918	4.225	0.846	1.667	16.605	0.6085	0.1509
2ND QUARTILE :	41.403	6.166	2.395	5.175	25.525	0.8545	0.2225
3RD QUARTILE :	64.420	8.628	3.752	7.667	36.520	1.4527	0.3040
VOL. WGT. MEAN :	44.374	6.693	2.960	6.139	29.080	1.7903	0.2593

\*\*\*\*\* : INSUFFICIENT DATA

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

NOTE(2): THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION (SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

---

STATION NAME : SOUTH CANFIELD/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4, 83 TO DEC 6,83

PAGE : 2

	NICKEL	ZINC	IRON	LEAD	VANADIUM	ALUMINUM	COPPER
	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2
# OF SAMPLES :	11	11	11	11	11	11	11
MAXIMUM :	0.0670	0.720	6.2926	0.8788	0.134	6.156	0.2866
MINIMUM :	0.0154	0.199	1.0557	0.2768	0.031	0.963	0.0378
RANGE :	0.0516	0.521	5.2369	0.6019	0.103	5.193	0.2488
ARITH. MEAN :	0.0361	0.399	3.3731	0.5277	0.069	3.620	0.0865
ARITH. STD. DEV :	0.0154	0.167	1.7813	0.1751	0.032	2.032	0.0700
GEOM. MEAN :	0.0331	0.372	2.9437	0.5008	0.062	3.024	0.0728
GEOM. STD. DEV. :	1.5568	1.469	1.7567	1.4125	1.593	1.947	1.7177
1ST QUARTILE :	0.0205	0.271	1.8113	0.3373	0.040	1.584	0.0553
2ND QUARTILE :	0.0340	0.366	2.5854	0.5151	0.061	2.933	0.0602
3RD QUARTILE :	0.0417	0.391	4.5360	0.6227	0.083	5.587	0.0755
VOL. WGT. MEAN :	0.0367	0.406	3.4279	0.5363	0.070	3.679	0.0879

CADMIUM

MG/M\*\*2

# OF SAMPLES :	11
MAXIMUM :	0.01420
MINIMUM :	0.00195
RANGE :	0.01225
ARITH. MEAN :	0.00472
ARITH. STD. DEV :	0.00344
GEOM. MEAN :	0.00400
GEOM. STD. DEV. :	1.75579
1ST QUARTILE :	0.00244
2ND QUARTILE :	0.00365
3RD QUARTILE :	0.00488
VOL. WGT. MEAN :	0.00480



ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

---

STATION NAME : TORONTO/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4, 83 TO JAN 3,84

PAGE : 1

	PRECIP. MM	FREE H+ LAB MG/M**2	TOTAL H+ TO PH8.3 MG/M**2	SULPHATE MG/M**2	NITRATE AS N MG/M**2	CALCIUM MG/M**2	CHLORIDE MG/M**2
# OF SAMPLES :	13	9	10	12	12	12	12
MAXIMUM :	102.0	2.9746	10.8936	623.00	80.500	273.000	202.340
MINIMUM :	18.0	0.0026	0.8928	161.00	23.100	29.700	12.870
RANGE :	84.0	2.9720	10.0008	462.00	57.400	243.300	189.470
ARITH. MEAN :	56.8	1.0093	3.2798	343.73	43.611	118.744	79.474
ARITH. STD. DEV :	24.4	1.0092	2.8863	145.60	15.696	72.347	76.555
GEOM. MEAN :	51.3	0.2887	2.5559	318.14	41.240	98.986	49.300
GEOM. STD. DEV. :	1.6	11.3349	2.0300	1.50	1.416	1.922	2.830
1ST QUARTILE :	37.0	0.0605	1.4428	246.67	32.190	62.630	22.240
2ND QUARTILE :	53.0	0.7139	2.6514	324.08	43.724	105.300	37.452
3RD QUARTILE :	68.5	1.3928	3.3759	385.37	47.825	176.760	163.977
VOL. WGT. MEAN :	*****	0.9755	3.0421	325.22	41.262	112.350	75.194

	KJELDAHL AS N MG/M**2	MAGNESIM MG/M**2	POTASSIM MG/M**2	SODIUM MG/M**2	AMMONIUM AS N MG/M**2	PHOSPHOR MG/M**2	MANGANSE MG/M**2
# OF SAMPLES :	12	12	12	12	12	12	12
MAXIMUM :	97.150	55.300	8.710	134.000	73.440	7.9730	1.4000
MINIMUM :	16.560	0.818	1.640	1.815	14.076	0.3960	0.2300
RANGE :	80.590	54.482	7.070	132.185	59.364	7.5770	1.1700
ARITH. MEAN :	44.334	21.507	4.011	43.502	34.591	1.6613	0.6330
ARITH. STD. DEV :	25.392	15.887	2.341	51.230	16.626	2.0580	0.3542
GEOM. MEAN :	38.726	14.739	3.431	18.349	31.280	1.1377	0.5514
GEOM. STD. DEV. :	1.704	3.052	1.797	4.448	1.598	2.2515	1.7325
1ST QUARTILE :	26.676	9.245	2.080	7.120	23.570	0.6085	0.4005
2ND QUARTILE :	35.100	17.648	3.236	14.147	31.121	1.1645	0.5119
3RD QUARTILE :	56.670	35.085	5.580	95.397	45.225	1.4880	0.9105
VOL. WGT. MEAN :	41.946	20.349	3.795	41.159	32.729	1.5718	0.5989

\*\*\*\*\* : INSUFFICIENT DATA

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

NOTE(2): THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION  
(SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

---

STATION NAME : TORONTO/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4, 83 TO JAN 3,84

PAGE : 2

	NICKEL	ZINC	IRON	LEAD	VANADIUM	ALUMINUM	COPPER
	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2
# OF SAMPLES :	12	12	11	12	12	12	12
MAXIMUM :	0.1400	25.219	28.2870	4.9455	0.102	16.387	0.9077
MINIMUM :	0.0205	0.695	3.9072	1.0893	0.033	2.968	0.0757
RANGE :	0.1195	24.524	24.3798	3.8562	0.069	13.419	0.8320
ARITH. MEAN :	0.0532	3.640	11.0194	2.6641	0.064	7.571	0.4920
ARITH. STD. DEV :	0.0383	6.843	7.9350	1.3112	0.020	4.553	0.2581
GEOM. MEAN :	0.0434	1.889	8.8579	2.3599	0.061	6.463	0.4012
GEOM. STD. DEV. :	1.9042	2.591	1.9785	1.6940	1.394	1.793	2.1469
1ST QUARTILE :	0.0265	0.993	4.5002	1.4692	0.047	3.993	0.2349
2ND QUARTILE :	0.0332	1.633	7.0002	2.4935	0.065	6.949	0.5770
3RD QUARTILE :	0.0799	2.713	16.0146	3.6620	0.080	10.190	0.6571
VOL. WGT. MEAN :	0.0503	3.444	10.5374	2.5206	0.061	7.163	0.4655

CADMIUM

	MG/M**2
# OF SAMPLES :	12
MAXIMUM :	0.04090
MINIMUM :	0.00580
RANGE :	0.03510
ARITH. MEAN :	0.01799
ARITH. STD. DEV :	0.01099
GEOM. MEAN :	0.01486
GEOM. STD. DEV. :	1.95492
1ST QUARTILE :	0.00790
2ND QUARTILE :	0.01840
3RD QUARTILE :	0.02591
VOL. WGT. MEAN :	0.01702

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

---

STATION NAME : VILLA NOVA/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4, 83 TO JAN 3,84

PAGE : 1

	PRECIP.	FREE H+	TOTAL H+	SULPHATE	NITRATE	CALCIUM	CHLORIDE
	MM	LAB MG/M**2	TO PH8.3 MG/M**2	MG/M**2	AS N MG/M**2	MG/M**2	MG/M**2
# OF SAMPLES :	13	12	12	13	13	13	13
MAXIMUM :	248.0	13.6286	25.1472	1078.80	124.000	83.220	42.160
MINIMUM :	32.0	2.0776	3.5968	123.20	17.520	13.760	4.550
RANGE :	216.0	11.5510	21.5504	955.60	106.480	69.460	37.610
ARITH. MEAN :	80.4	4.4873	7.5726	310.96	37.655	32.826	17.603
ARITH. STD. DEV :	55.3	3.0147	5.7890	243.16	27.383	21.627	11.829
GEOM. MEAN :	69.2	3.9667	6.4830	264.50	32.699	28.135	13.985
GEOM. STD. DEV. :	1.7	1.5884	1.6770	1.69	1.633	1.728	2.083
1ST QUARTILE :	49.0	3.0508	4.9658	197.25	24.190	18.562	6.395
2ND QUARTILE :	65.0	3.5699	5.6809	235.87	29.488	26.200	13.900
3RD QUARTILE :	82.0	4.6921	8.2188	282.81	36.340	31.885	22.020
VOL. WGT. MEAN :	*****	4.4533	7.5151	310.96	37.655	32.826	17.603

	KJELDAHL AS N	MAGNESIM	POTASSIM	SODIUM	AMMONIUM AS N	PHOSPHOR	MANGANSE
	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2
# OF SAMPLES :	13	13	13	13	13	13	13
MAXIMUM :	124.000	17.885	34.310	11.154	101.680	3.5770	0.9920
MINIMUM :	16.302	2.800	0.214	0.840	0.858	0.3200	0.1410
RANGE :	107.698	15.085	34.095	10.314	100.822	3.2570	0.8510
ARITH. MEAN :	39.181	6.624	5.888	5.414	30.218	1.2978	0.3537
ARITH. STD. DEV :	28.128	4.194	9.225	3.115	25.898	0.9905	0.2103
GEOM. MEAN :	33.582	5.763	2.731	4.338	19.754	1.0181	0.3147
GEOM. STD. DEV. :	1.697	1.681	3.648	2.188	3.264	2.0530	1.6149
1ST QUARTILE :	23.405	4.190	1.287	2.945	16.487	0.6135	0.2500
2ND QUARTILE :	28.465	5.211	2.427	4.795	22.170	0.9845	0.3104
3RD QUARTILE :	36.873	6.451	4.822	7.552	31.381	1.2080	0.3785
VOL. WGT. MEAN :	39.181	6.624	5.888	5.414	30.218	1.2978	0.3537

\*\*\*\*\* : INSUFFICIENT DATA

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

NOTE(2): THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION (SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

---

STATION NAME : VILLA NOVA/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4, 83 TO JAN 3,84

PAGE : 2

	NICKEL	ZINC	IRON	LEAD	VANADIUM	ALUMINUM	COPPER
	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2
# OF SAMPLES :	13	12	12	12	13	12	12
MAXIMUM :	0.2480	1.739	15.5570	3.2339	0.248	13.819	0.7472
MINIMUM :	0.0160	0.215	1.4659	0.3347	0.032	1.129	0.0436
RANGE :	0.2320	1.524	14.0911	2.8992	0.216	12.690	0.7036
ARITH. MEAN :	0.0555	0.534	4.7226	0.8030	0.080	4.728	0.1655
ARITH. STD. DEV :	0.0610	0.403	3.8259	0.7879	0.055	3.633	0.2049
GEOM. MEAN :	0.0406	0.456	3.8519	0.6390	0.069	3.736	0.1064
GEOM. STD. DEV. :	2.0872	1.705	1.8607	1.8400	1.703	2.044	2.4078
1ST QUARTILE :	0.0245	0.320	2.4327	0.4166	0.049	2.323	0.0608
2ND QUARTILE :	0.0338	0.428	3.8980	0.6565	0.065	3.916	0.0745
3RD QUARTILE :	0.0512	0.565	4.4877	0.7751	0.082	5.072	0.1806
VOL. WGT. MEAN :	0.0555	0.530	4.6867	0.7970	0.080	4.692	0.1642

CADMIUM

MG/M\*\*2

# OF SAMPLES :	13
MAXIMUM :	0.12400
MINIMUM :	0.00175
RANGE :	0.12225
ARITH. MEAN :	0.01419
ARITH. STD. DEV :	0.03310
GEOM. MEAN :	0.00569
GEOM. STD. DEV. :	2.89942
1ST QUARTILE :	0.00282
2ND QUARTILE :	0.00410
3RD QUARTILE :	0.00705
VOL. WGT. MEAN :	0.01419

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

---

STATION NAME : HALDIMAND-NORFOLK REGION(NEMP)/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4, 83 TO JAN 3,84

PAGE : 1

	PRECIP. MM	FREE H+ LAB MG/M**2	TOTAL H+ TO PH8.3 MG/M**2	SULPHATE MG/M**2	NITRATE AS N MG/M**2	CALCIUM MG/M**2	CHLORIDE MG/M**2
# OF SAMPLES :	76	72	72	71	71	71	71
MAXIMUM :	248.0	15.5029	25.3804	1080.70	124.000	106.400	98.560
MINIMUM :	11.0	0.0004	0.4408	108.07	17.520	10.250	3.540
RANGE :	237.0	15.5025	24.9396	972.63	106.480	96.150	95.020
ARITH. MEAN :	74.2	4.0377	6.8989	325.33	38.699	34.010	19.430
ARITH. STD. DEV :	42.3	2.7348	4.8750	222.79	20.860	19.614	15.435
GEOM. MEAN :	64.3	2.8490	5.6955	274.90	34.995	29.279	15.383
GEOM. STD. DEV. :	1.7	4.0294	1.9040	1.74	1.525	1.732	1.973
1ST QUARTILE :	42.8	2.6443	4.2656	182.85	26.650	18.420	10.850
2ND QUARTILE :	69.5	3.4506	5.7234	254.15	32.091	26.965	15.386
3RD QUARTILE :	86.5	4.6729	7.7280	371.02	41.765	43.820	22.605
VOL. WGT. MEAN :	*****	3.9628	6.7710	313.89	38.140	33.037	18.948

	KJELDAHL AS N MG/M**2	MAGNESIM MG/M**2	POTASSIM MG/M**2	SODIUM MG/M**2	AMMONIUM AS N MG/M**2	PHOSPHOR MG/M**2	MANGANSE MG/M**2
# OF SAMPLES :	74	71	70	71	74	73	73
MAXIMUM :	233.700	23.275	65.075	38.570	146.300	22.2300	1.3300
MINIMUM :	13.804	1.770	0.000	0.000	0.858	0.1080	0.0205
RANGE :	219.896	21.505	65.075	38.570	145.442	22.1220	1.3095
ARITH. MEAN :	49.833	7.944	4.994	6.355	36.227	1.5945	0.3873
ARITH. STD. DEV :	42.765	4.910	9.056	5.954	29.212	2.8387	0.2672
GEOM. MEAN :	39.145	6.678	2.665	4.668	26.652	0.9929	0.3156
GEOM. STD. DEV. :	1.933	1.808	2.858	2.174	2.393	2.2971	1.9498
1ST QUARTILE :	22.933	4.234	1.169	2.175	17.449	0.5430	0.2235
2ND QUARTILE :	38.960	5.972	2.820	4.972	27.585	0.9145	0.3060
3RD QUARTILE :	56.045	9.675	4.780	7.649	46.263	1.3032	0.4245
VOL. WGT. MEAN :	49.105	7.717	4.891	6.173	35.570	1.5841	0.3838

\*\*\*\*\* : INSUFFICIENT DATA

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

NOTE(2): THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION (SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

PART VI

SUMMARY STATISTICS OF WET DEPOSITION BY REGION

1983

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

---

STATION NAME : HALDIMAND-NORFOLK REGION(NEMP)/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4, 83 TO JAN 3,84

PAGE : 2

	NICKEL	ZINC	IRON	LEAD	VANADIUM	ALUMINUM	COPPER
	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2
# OF SAMPLES :	73	68	68	68	73	68	68
MAXIMUM :	0.2480	2.828	16.4493	3.3299	0.248	15.221	0.7472
MINIMUM :	0.0095	0.184	1.0557	0.0639	0.011	0.782	0.0378
RANGE :	0.2385	2.644	15.3936	3.2660	0.237	14.438	0.7094
ARITH. MEAN :	0.0411	0.579	4.7122	0.6803	0.076	4.568	0.1174
ARITH. STD. DEV :	0.0319	0.412	3.1779	0.5974	0.044	3.064	0.1174
GEOM. MEAN :	0.0342	0.497	3.9172	0.5474	0.065	3.656	0.0916
GEOM. STD. DEV. :	1.7912	1.668	1.8259	1.8724	1.761	2.009	1.8606
1ST QUARTILE :	0.0220	0.370	2.5854	0.3764	0.043	2.154	0.0598
2ND QUARTILE :	0.0350	0.444	3.8555	0.5147	0.069	4.355	0.0796
3RD QUARTILE :	0.0485	0.641	6.1459	0.7310	0.089	5.834	0.1244
VOL. WGT. MEAN :	0.0407	0.573	4.6688	0.6741	0.075	4.526	0.1163

CADMIUM

MG/M\*\*2

# OF SAMPLES :	73
MAXIMUM :	0.12400
MINIMUM :	0.00150
RANGE :	0.12250
ARITH. MEAN :	0.00688
ARITH. STD. DEV :	0.01486
GEOM. MEAN :	0.00444
GEOM. STD. DEV. :	2.01876
1ST QUARTILE :	0.00290
2ND QUARTILE :	0.00405
3RD QUARTILE :	0.00551
VOL. WGT. MEAN :	0.00682

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

---

STATION NAME : SUDBURY REGION/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4, 83 TO JAN 3,84

PAGE : 1

	PRECIP. MM	FREE H+ LAB MG/M**2	TOTAL H+ TO PH8.3 MG/M**2	SULPHATE MG/M**2	NITRATE AS N MG/M**2	CALCIUM MG/M**2	CHLORIDE MG/M**2
# OF SAMPLES :	38	34	33	34	35	33	35
MAXIMUM :	135.0	7.8124	14.4720	567.30	72.900	26.730	61.640
MINIMUM :	16.1	0.0015	2.0884	38.75	1.340	2.359	0.000
RANGE :	118.9	7.8110	12.3836	528.54	71.560	24.371	61.640
ARITH. MEAN :	60.7	3.9091	6.1867	237.35	28.033	12.166	16.452
ARITH. STD. DEV :	34.7	2.0960	3.1563	136.93	13.737	6.840	15.420
GEOM. MEAN :	51.3	2.7899	5.4194	197.09	23.872	9.983	11.451
GEOM. STD. DEV. :	1.8	4.2393	1.7092	1.92	1.988	1.996	2.193
1ST QUARTILE :	31.4	2.4371	3.6814	113.95	18.453	5.160	6.720
2ND QUARTILE :	52.6	3.5258	5.2480	221.85	27.294	12.655	10.116
3RD QUARTILE :	77.9	5.3711	8.4712	337.90	35.109	15.785	21.347
VOL. WGT. MEAN :	*****	3.7579	5.9051	230.98	27.822	11.612	16.328

	KJELDAHL AS N MG/M**2	MAGNESIM MG/M**2	POTASSIM MG/M**2	SODIUM MG/M**2	AMMONIUM AS N MG/M**2	PHOSPHOR MG/M**2	MANGANSE MG/M**2
# OF SAMPLES :	35	33	33	33	33	35	35
MAXIMUM :	770.500	9.715	194.970	56.615	65.100	79.7300	1.0200
MINIMUM :	7.830	0.000	0.260	0.980	5.464	0.0132	0.0337
RANGE :	762.670	9.715	194.710	55.635	59.636	79.7167	0.9863
ARITH. MEAN :	50.616	2.360	8.207	11.593	23.841	3.0265	0.2147
ARITH. STD. DEV :	126.720	2.062	33.560	13.539	14.700	13.3643	0.1955
GEOM. MEAN :	26.611	1.841	2.095	6.380	19.742	0.5305	0.1589
GEOM. STD. DEV. :	2.371	2.060	3.154	3.117	1.892	4.3679	2.1979
1ST QUARTILE :	15.177	0.928	0.902	2.534	11.569	0.1912	0.0757
2ND QUARTILE :	23.990	1.683	2.321	6.389	18.960	0.6425	0.1950
3RD QUARTILE :	41.965	3.110	3.072	14.175	32.534	1.0960	0.2510
VOL. WGT. MEAN :	50.235	2.252	7.834	11.065	23.254	3.0037	0.2131

\*\*\*\*\* : INSUFFICIENT DATA

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

NOTE(2): THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION  
(SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.



ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

---

STATION NAME : SUDBURY REGION/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 4, 83 TO JAN 3,84

PAGE : 2

	NICKEL	ZINC	IRON	LEAD	VANADIUM	ALUMINUM	COPPER
	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2
# OF SAMPLES :	35	33	33	33	35	33	33
MAXIMUM :	4.9950	8.161	177.1200	3.2319	0.180	67.800	7.4169
MINIMUM :	0.0110	0.122	0.8760	0.1820	0.016	0.832	0.0388
RANGE :	4.9840	8.039	176.2439	3.0499	0.164	66.968	7.3781
ARITH. MEAN :	0.5349	0.797	12.8513	0.6802	0.065	6.314	0.7738
ARITH. STD. DEV :	1.1484	1.378	31.0841	0.5286	0.041	11.760	1.3719
GEOM. MEAN :	0.1471	0.516	5.4050	0.5717	0.054	3.410	0.3335
GEOM. STD. DEV. :	4.9691	2.174	2.9961	1.7570	1.903	2.641	3.5864
1ST QUARTILE :	0.0390	0.346	3.3676	0.4233	0.031	1.596	0.1559
2ND QUARTILE :	0.1253	0.513	4.4855	0.5611	0.048	2.756	0.2979
3RD QUARTILE :	0.4150	0.652	7.8124	0.7842	0.092	4.729	0.6969
VOL. WGT. MEAN :	0.5308	0.776	12.5166	0.6625	0.065	6.150	0.7536

CADMIUM

MG/M\*\*2

# OF SAMPLES :	35
MAXIMUM :	0.16200
MINIMUM :	0.00173
RANGE :	0.16026
ARITH. MEAN :	0.02325
ARITH. STD. DEV :	0.02772
GEOM. MEAN :	0.01458
GEOM. STD. DEV. :	2.79645
1ST QUARTILE :	0.00737
2ND QUARTILE :	0.01549
3RD QUARTILE :	0.02908
VOL. WGT. MEAN :	0.02308

PART VII

SUMMARY STATISTICS OF PRECIPITATION CONCENTRATION BY STAION

1984

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

---

STATION NAME : BURWASH/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3,84 TO JAN 4,85

PAGE : 1

	PRECIP.	CONDUCT.	PH	FREE H+	TOTAL H+	SULPHATE	NITRATE
	MM	UMHO/CM	LAB	LAB MG/L	GRAN MG/L	MG/L	AS N MG/L
# OF SAMPLES :	11	10	10	10	10	10	10
MAXIMUM :	122.0	82.0	4.93	0.1349	0.1920	6.05	1.620
MINIMUM :	21.5	6.6	3.87	0.0117	0.0279	0.80	0.080
RANGE :	100.5	75.4	1.06	0.1231	0.1641	5.25	1.540
ARITH. MEAN :	62.0	35.1	4.28	0.0609	0.0885	2.75	0.589
ARITH. STD. DEV :	33.2	20.0	0.27	0.0319	0.0423	1.43	0.501
GEOM. MEAN :	54.2	29.9	4.27	0.0527	0.0802	2.44	0.419
GEOM. STD. DEV. :	1.7	1.9	1.06	1.8690	1.6173	1.71	2.504
1ST QUARTILE :	32.8	24.4	4.12	0.0443	0.0699	1.85	0.200
2ND QUARTILE :	49.7	29.7	4.25	0.0562	0.0765	2.60	0.430
3RD QUARTILE :	78.5	38.3	4.32	0.0688	0.0955	2.88	0.635
VOL. WGT. MEAN :	*****	30.6	*****	0.0552	0.0788	2.63	0.448

	CALCIUM	CHLORIDE	KJELDAHL	MAGNESIM	POTASSIM	SODIUM	AMMONIUM
	MG/L	MG/L	AS N MG/L	MG/L	MG/L	MG/L	AS N MG/L
# OF SAMPLES :	9	10	9	9	9	9	10
MAXIMUM :	0.410	3.300	0.880	0.070	0.050	1.950	0.630
MINIMUM :	0.030	0.020	0.120	0.000	0.000	0.000	0.000
RANGE :	0.380	3.280	0.760	0.070	0.050	1.950	0.630
ARITH. MEAN :	0.162	0.738	0.400	0.027	0.018	0.356	0.258
ARITH. STD. DEV :	0.121	1.109	0.216	0.021	0.018	0.625	0.169
GEOM. MEAN :	0.124	0.264	0.351	0.038	0.020	0.184	0.291
GEOM. STD. DEV. :	2.242	4.772	1.747	2.075	3.178	4.125	1.676
1ST QUARTILE :	0.075	0.095	0.260	0.012	0.004	0.027	0.125
2ND QUARTILE :	0.095	0.175	0.360	0.017	0.006	0.072	0.262
3RD QUARTILE :	0.210	0.610	0.430	0.035	0.025	0.235	0.303
VOL. WGT. MEAN :	0.129	0.444	0.350	0.021	0.016	0.197	0.244

\*\*\*\*\* : INSUFFICIENT DATA OR NOT APPLICABLE  
NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY  
-----

STATION NAME : BURWASH/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3,84 TO JAN 4,85

PAGE : 2

	PHOSPHOR	MANGANSE	NICKEL	ZINC	IRON	LEAD	VANADIUM
	MG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
# OF SAMPLES :	9	9	9	9	9	9	9
MAXIMUM :	0.0170	5.00	26.00	21.23	226.70	24.34	1.00
MINIMUM :	0.0005	0.50	0.50	1.23	5.96	3.89	0.20
RANGE :	0.0165	4.50	25.50	20.00	220.74	20.45	0.80
ARITH. MEAN :	0.0062	1.83	4.19	7.31	52.13	9.14	0.82
ARITH. STD. DEV :	0.0063	1.56	8.39	7.00	68.80	6.69	0.35
GEOM. MEAN :	0.0035	1.31	1.23	4.86	29.79	7.54	0.70
GEOM. STD. DEV. :	3.4193	2.42	4.35	2.68	2.98	1.87	2.03
1ST QUARTILE :	0.0012	0.50	0.50	2.42	14.73	4.30	0.60
2ND QUARTILE :	0.0035	1.00	0.50	4.12	24.22	6.08	1.00
3RD QUARTILE :	0.0065	2.50	1.60	6.80	41.49	9.36	1.00
VOL. WGT. MEAN :	0.0045	1.45	1.96	5.13	32.57	7.06	0.86

	ALUMINUM	COPPER	CADMIUM
	UG/L	UG/L	UG/L
# OF SAMPLES :	9	9	9
MAXIMUM :	117.20	53.37	1.30
MINIMUM :	8.14	0.77	0.05
RANGE :	109.06	52.60	1.25
ARITH. MEAN :	38.06	9.79	0.28
ARITH. STD. DEV :	33.98	17.08	0.39
GEOM. MEAN :	27.71	3.65	0.17
GEOM. STD. DEV. :	2.33	4.08	2.60
1ST QUARTILE :	14.37	1.00	0.10
2ND QUARTILE :	21.97	2.94	0.10
3RD QUARTILE :	44.72	4.61	0.23
VOL. WGT. MEAN :	28.91	4.83	0.17

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY  
-----

STATION NAME : DOG'S NEST EAST/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3,84 TO JAN 2,85

PAGE : 1

	PRECIP. MM	CONDUCT. UMHO/CM	PH LAB	FREE H+ LAB MG/L	TOTAL H+ GRAN MG/L	SULPHATE MG/L	NITRATE AS N MG/L
# OF SAMPLES :	10	10	10	10	10	10	10
MAXIMUM :	141.0	60.5	4.76	0.0871	0.1190	8.15	1.080
MINIMUM :	14.0	25.5	4.06	0.0174	0.0548	2.15	0.440
RANGE :	127.0	35.0	0.70	0.0697	0.0642	6.00	0.640
ARITH. MEAN :	83.4	38.8	4.30	0.0548	0.0848	4.45	0.692
ARITH. STD. DEV :	37.7	10.6	0.22	0.0225	0.0227	1.70	0.215
GEOM. MEAN :	72.1	37.6	4.30	0.0498	0.0821	4.18	0.663
GEOM. STD. DEV. :	1.9	1.3	1.05	1.6408	1.3102	1.46	1.362
1ST QUARTILE :	55.5	29.5	4.11	0.0369	0.0637	3.22	0.480
2ND QUARTILE :	78.3	37.6	4.30	0.0510	0.0815	3.95	0.660
3RD QUARTILE :	112.0	40.9	4.35	0.0717	0.0982	5.20	0.810
VOL. WGT. MEAN :	*****	37.6	*****	0.0506	0.0806	4.40	0.662

	CALCIUM MG/L	CHLORIDE MG/L	KJELDAHL AS N MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L
# OF SAMPLES :	10	10	10	10	10	10	10
MAXIMUM :	2.350	0.760	1.780	0.450	0.270	0.385	1.600
MINIMUM :	0.140	0.160	0.330	0.040	0.020	0.040	0.232
RANGE :	2.210	0.600	1.450	0.410	0.250	0.345	1.368
ARITH. MEAN :	0.641	0.394	0.794	0.116	0.070	0.177	0.676
ARITH. STD. DEV :	0.664	0.234	0.419	0.123	0.076	0.130	0.405
GEOM. MEAN :	0.453	0.340	0.709	0.085	0.050	0.134	0.580
GEOM. STD. DEV. :	2.298	1.755	1.645	2.121	2.265	2.275	1.793
1ST QUARTILE :	0.235	0.215	0.455	0.042	0.025	0.065	0.332
2ND QUARTILE :	0.400	0.305	0.695	0.070	0.042	0.132	0.592
3RD QUARTILE :	0.620	0.495	0.910	0.118	0.070	0.238	0.813
VOL. WGT. MEAN :	0.630	0.375	0.793	0.121	0.070	0.166	0.664

\*\*\*\*\* : INSUFFICIENT DATA OR NOT APPLICABLE  
NOTE(1): PRICIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY  
-----

STATION NAME : DOG'S NEST EAST/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3,84 TO JAN 2,85

PAGE : 2

	PHOSPHOR	MANGANSE	NICKEL	ZINC	IRON	LEAD	VANADIUM
	MG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
# OF SAMPLES :	10	10	10	10	10	10	10
MAXIMUM :	0.0780	37.00	2.00	28.26	439.30	13.01	2.00
MINIMUM :	0.0050	2.00	0.40	5.85	22.93	6.35	0.20
RANGE :	0.0730	35.00	1.60	22.41	416.37	6.66	1.80
ARITH. MEAN :	0.0254	9.60	0.84	12.44	100.82	8.74	0.88
ARITH. STD. DEV. :	0.0257	10.96	0.63	6.78	133.48	2.27	0.52
GEOM. MEAN :	0.0170	6.25	0.70	11.06	59.48	8.49	0.72
GEOM. STD. DEV. :	2.5029	2.50	1.81	1.65	2.65	1.28	2.11
1ST QUARTILE :	0.0080	3.00	0.50	6.84	28.83	6.84	0.35
2ND QUARTILE :	0.0140	6.00	0.50	11.49	42.69	7.78	1.00
3RD QUARTILE :	0.0260	8.00	0.75	14.85	70.10	10.09	1.00
VOL. WGT. MEAN :	0.0245	9.33	0.79	12.54	100.37	8.12	0.81

	ALUMINUM	COPPER	CADMIUM
	UG/L	UG/L	UG/L
# OF SAMPLES :	10	10	10
MAXIMUM :	539.00	4.01	0.40
MINIMUM :	19.11	0.77	0.07
RANGE :	519.89	3.24	0.33
ARITH. MEAN :	114.40	1.93	0.17
ARITH. STD. DEV. :	166.22	1.27	0.11
GEOM. MEAN :	61.16	1.61	0.15
GEOM. STD. DEV. :	2.86	1.87	1.75
1ST QUARTILE :	28.19	0.88	0.10
2ND QUARTILE :	50.31	1.31	0.11
3RD QUARTILE :	62.06	2.62	0.19
VOL. WGT. MEAN :	115.10	1.74	0.19

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

---

STATION NAME : GERMAIN PARK/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3,84 TO JAN 2,85

PAGE : 1

	PRECIP.	CONDUCT.	PH	FREE H+	TOTAL H+	SULPHATE	NITRATE
	MM	UMHO/CM	LAB	LAB	GRAN	MG/L	AS N
				MG/L	MG/L		MG/L
# OF SAMPLES :	10	10	10	10	10	10	10
MAXIMUM :	146.0	61.0	7.04	0.0912	0.1080	12.40	1.580
MINIMUM :	11.6	20.4	4.04	0.0001	0.0143	3.45	0.410
RANGE :	134.4	40.6	3.00	0.0911	0.0937	8.95	1.170
ARITH. MEAN :	73.9	44.2	5.32	0.0274	0.0535	7.01	0.841
ARITH. STD. DEV :	39.9	14.7	1.15	0.0336	0.0356	2.55	0.372
GEOM. MEAN :	61.4	41.4	5.21	0.0048	0.0425	6.61	0.768
GEOM. STD. DEV. :	2.1	1.5	1.24	14.0860	2.1027	1.45	1.577
1ST QUARTILE :	38.0	27.1	4.24	0.0003	0.0216	4.85	0.465
2ND QUARTILE :	72.1	47.9	5.22	0.0077	0.0439	7.57	0.895
3RD QUARTILE :	87.6	54.1	5.98	0.0501	0.0758	8.02	0.980
VOL. WGT. MEAN :	*****	43.3	*****	0.0393	0.0648	6.96	0.735

	CALCIUM	CHLORIDE	KJELDAHL	MAGNESIM	POTASSIM	SODIUM	AMMONIUM
	MG/L	MG/L	AS N	MG/L	MG/L	MG/L	AS N
			MG/L				MG/L
# OF SAMPLES :	9	9	9	9	9	8	10
MAXIMUM :	8.000	1.050	2.750	0.850	1.050	0.350	2.250
MINIMUM :	1.050	0.270	0.530	0.245	0.005	0.055	0.500
RANGE :	6.950	0.780	2.220	0.605	1.045	0.295	1.750
ARITH. MEAN :	2.533	0.531	1.162	0.468	0.181	0.168	0.927
ARITH. STD. DEV :	2.204	0.263	0.673	0.226	0.333	0.110	0.512
GEOM. MEAN :	2.022	0.478	1.028	0.424	0.068	0.139	0.840
GEOM. STD. DEV. :	1.917	1.625	1.666	1.593	4.209	1.935	1.552
1ST QUARTILE :	1.190	0.300	0.695	0.277	0.045	0.087	0.600
2ND QUARTILE :	1.710	0.425	0.960	0.370	0.050	0.118	0.765
3RD QUARTILE :	2.125	0.635	1.230	0.512	0.072	0.265	0.905
VOL. WGT. MEAN :	1.939	0.455	1.013	0.388	0.122	0.143	0.823

\*\*\*\*\* : INSUFFICIENT DATA OR NOT APPLICABLE  
NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY  
-----

STATION NAME : GERMAIN PARK/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3,84 TO JAN 2,85

PAGE : 2

	PHOSPHOR	MANGANESE	NICKEL	ZINC	IRON	LEAD	VANADIUM
	MG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
# OF SAMPLES :	9	9	9	9	9	9	9
MAXIMUM :	0.4200	17.00	8.00	179.90	273.20	72.73	15.00
MINIMUM :	0.0050	4.00	0.50	15.53	45.53	9.97	1.00
RANGE :	0.4150	13.00	7.50	164.37	227.67	62.76	14.00
ARITH. MEAN :	0.0706	8.56	1.93	45.34	134.20	29.80	5.72
ARITH. STD. DEV :	0.1338	4.75	2.43	51.99	78.35	20.64	4.68
GEOM. MEAN :	0.0259	7.57	1.18	32.40	114.47	24.70	4.01
GEOM. STD. DEV. :	3.8539	1.67	2.68	2.14	1.85	1.89	2.63
1ST QUARTILE :	0.0095	5.00	0.50	18.55	75.07	16.44	1.50
2ND QUARTILE :	0.0185	7.00	0.80	23.80	104.60	19.99	4.95
3RD QUARTILE :	0.0295	8.00	1.65	36.87	147.10	31.13	5.80
VOL. WGT. MEAN :	0.0478	7.23	1.11	29.94	117.47	25.50	4.41

	ALUMINUM	COPPER	CADMIUM
	UG/L	UG/L	UG/L
# OF SAMPLES :	9	9	9
MAXIMUM :	356.30	222.10	1.00
MINIMUM :	47.71	4.46	0.10
RANGE :	308.59	217.64	0.90
ARITH. MEAN :	143.21	38.01	0.23
ARITH. STD. DEV :	102.08	70.48	0.29
GEOM. MEAN :	116.56	15.86	0.16
GEOM. STD. DEV. :	1.96	3.29	2.10
1ST QUARTILE :	67.34	8.31	0.10
2ND QUARTILE :	99.94	9.82	0.11
3RD QUARTILE :	162.05	13.77	0.17
VOL. WGT. MEAN :	123.27	15.78	0.14

1501



ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY  
-----

STATION NAME : HANMER/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3,84 TO JAN 4,85

PAGE : 1

	PRECIP. MM	CONDUCT. UMHO/CM	PH LAB	FREE H+ LAB MG/L	TOTAL H+ GRAN MG/L	SULPHATE MG/L	NITRATE AS N MG/L
# OF SAMPLES :	6	5	5	5	5	5	5
MAXIMUM :	103.0	85.0	4.67	0.1660	0.2210	6.90	1.760
MINIMUM :	18.2	14.3	3.78	0.0214	0.0459	1.55	0.140
RANGE :	84.8	70.7	0.89	0.1446	0.1751	5.35	1.620
ARITH. MEAN :	43.9	44.8	4.19	0.0782	0.1169	3.29	0.900
ARITH. STD. DEV. :	31.2	27.7	0.32	0.0533	0.0645	2.08	0.658
GEOM. MEAN :	36.9	37.7	4.18	0.0643	0.1035	2.89	0.660
GEOM. STD. DEV. :	1.9	2.0	1.08	2.0778	1.7569	1.72	2.698
1ST QUARTILE :	20.6	21.5	3.95	0.0422	0.0711	2.02	0.360
2ND QUARTILE :	33.4	32.8	4.15	0.0638	0.0979	2.52	0.605
3RD QUARTILE :	42.8	47.9	4.19	0.0702	0.1107	2.75	1.010
VOL. WGT. MEAN :	*****	42.7	*****	0.0807	0.1197	3.39	0.854

	CALCIUM MG/L	CHLORIDE MG/L	KJELDAHL AS N MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L
# OF SAMPLES :	5	5	5	5	5	5	5
MAXIMUM :	0.550	4.600	0.870	0.075	0.080	3.880	0.690
MINIMUM :	0.140	0.200	0.180	0.030	0.008	0.155	0.045
RANGE :	0.410	4.400	0.690	0.045	0.072	3.725	0.645
ARITH. MEAN :	0.276	1.360	0.438	0.043	0.036	1.166	0.282
ARITH. STD. DEV. :	0.162	1.843	0.260	0.019	0.027	1.576	0.247
GEOM. MEAN :	0.246	0.716	0.384	0.040	0.028	0.552	0.199
GEOM. STD. DEV. :	1.683	3.397	1.765	1.454	2.371	3.947	2.739
1ST QUARTILE :	0.160	0.255	0.260	0.030	0.016	0.160	0.092
2ND QUARTILE :	0.205	0.460	0.345	0.035	0.027	0.298	0.195
3RD QUARTILE :	0.255	0.845	0.400	0.040	0.035	0.815	0.267
VOL. WGT. MEAN :	0.269	0.989	0.443	0.042	0.036	0.846	0.274

\*\*\*\*\* : INSUFFICIENT DATA OR NOT APPLICABLE  
NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY  
-----

STATION NAME : HANMER/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3,84 TO JAN 4,85

PAGE : 2

	PHOSPHOR	MANGANESE	NICKEL	ZINC	IRON	LEAD	VANADIUM
	MG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
# OF SAMPLES :	5	4	4	4	4	4	4
MAXIMUM :	0.0550	16.00	63.00	67.88	404.60	44.94	1.00
MINIMUM :	0.0015	2.00	0.50	13.34	42.37	7.42	0.20
RANGE :	0.0535	14.00	62.50	54.54	362.23	37.52	0.80
ARITH. MEAN :	0.0209	5.50	25.38	31.01	137.88	26.18	0.60
ARITH. STD. DEV :	0.0202	7.00	26.61	24.93	177.91	16.50	0.46
GEOM. MEAN :	0.0127	3.36	10.30	25.32	82.60	21.40	0.45
GEOM. STD. DEV. :	3.7254	2.83	8.14	2.01	2.90	2.21	2.53
1ST QUARTILE :	0.0072	2.00	8.75	16.38	45.20	13.05	0.20
2ND QUARTILE :	0.0150	2.00	19.00	21.40	52.28	26.18	0.60
3RD QUARTILE :	0.0175	9.00	42.00	45.63	230.57	39.31	1.00
VOL. WGT. MEAN :	0.0306	5.29	25.92	28.57	132.19	25.40	0.51
	ALUMINUM	COPPER	CADMIUM				
	UG/L	UG/L	UG/L				
# OF SAMPLES :	4	4	4				
MAXIMUM :	151.70	73.88	25.00				
MINIMUM :	35.62	4.71	0.20				
RANGE :	116.08	69.17	24.80				
ARITH. MEAN :	77.31	40.87	6.83				
ARITH. STD. DEV :	51.47	29.26	12.12				
GEOM. MEAN :	66.62	27.81	1.49				
GEOM. STD. DEV. :	1.85	3.41	7.72				
1ST QUARTILE :	44.08	19.03	0.45				
2ND QUARTILE :	60.96	42.44	1.05				
3RD QUARTILE :	110.53	62.71	13.20				
VOL. WGT. MEAN :	81.09	41.29	6.44				

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY  
-----

STATION NAME : LIVELY/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3,84 TO JAN 4,85

PAGE : 1

	PRECIP. MM	CONDUCT. UMHO/CM	PH LAB	FREE H+ LAB MG/L	TOTAL H+ GRAN MG/L	SULPHATE MG/L	NITRATE AS N MG/L
# OF SAMPLES :	13	12	12	12	12	12	12
MAXIMUM :	145.0	55.3	7.29	0.1072	0.1440	5.60	1.150
MINIMUM :	20.0	27.5	3.97	0.0001	0.0374	1.95	0.130
RANGE :	125.0	27.8	3.32	0.1071	0.1066	3.65	1.020
ARITH. MEAN :	65.4	38.7	4.45	0.0614	0.0928	3.53	0.551
ARITH. STD. DEV :	43.2	9.6	0.90	0.0268	0.0281	1.08	0.323
GEOM. MEAN :	53.3	37.7	4.39	0.0355	0.0883	3.37	0.466
GEOM. STD. DEV. :	2.0	1.3	1.18	7.9955	1.4129	1.38	1.880
1ST QUARTILE :	28.4	30.6	4.10	0.0525	0.0806	2.68	0.370
2ND QUARTILE :	46.1	35.5	4.22	0.0603	0.0882	3.42	0.460
3RD QUARTILE :	81.0	47.5	4.28	0.0795	0.1115	4.22	0.715
VOL. WGT. MEAN :	*****	36.0	*****	0.0546	0.0837	3.50	0.444

	CALCIUM MG/L	CHLORIDE MG/L	KJELDAHL AS N MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L
# OF SAMPLES :	11	12	12	11	11	11	12
MAXIMUM :	0.640	0.910	7.100	0.190	1.070	0.590	5.700
MINIMUM :	0.080	0.100	0.130	0.015	0.002	0.025	0.010
RANGE :	0.560	0.810	6.970	0.175	1.067	0.565	5.690
ARITH. MEAN :	0.249	0.367	1.024	0.049	0.130	0.197	0.799
ARITH. STD. DEV :	0.190	0.301	1.927	0.053	0.315	0.191	1.557
GEOM. MEAN :	0.200	0.265	0.518	0.034	0.019	0.120	0.326
GEOM. STD. DEV. :	1.952	2.351	2.730	2.277	7.383	2.988	4.208
1ST QUARTILE :	0.110	0.120	0.305	0.015	0.002	0.040	0.223
2ND QUARTILE :	0.175	0.220	0.465	0.025	0.012	0.105	0.390
3RD QUARTILE :	0.255	0.555	0.725	0.047	0.075	0.345	0.493
VOL. WGT. MEAN :	0.230	0.275	1.210	0.048	0.163	0.154	0.942

\*\*\*\*\* : INSUFFICIENT DATA OR NOT APPLICABLE  
NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY  
-----

STATION NAME : LIVELY/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3,84 TO JAN 4,85

PAGE : 2

	PHOSPHOR	MANGANESE	NICKEL	ZINC	IRON	LEAD	VANADIUM
	MG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
# OF SAMPLES :	12	12	12	12	12	12	12
MAXIMUM :	0.5500	8.00	72.00	19.26	1300.00	20.19	1.00
MINIMUM :	0.0000	0.50	6.00	3.90	21.00	5.44	0.20
RANGE :	0.5500	7.50	66.00	15.36	1279.00	14.75	0.80
ARITH. MEAN :	0.0587	2.96	25.67	8.01	234.84	12.45	0.87
ARITH. STD. DEV :	0.1554	2.22	19.12	4.62	347.30	4.40	0.31
GEOM. MEAN :	0.0329	2.27	19.49	7.04	130.41	11.70	0.76
GEOM. STD. DEV. :	4.9750	2.21	2.26	1.67	2.93	1.46	1.87
1ST QUARTILE :	0.0035	1.50	9.00	4.31	73.73	9.55	1.00
2ND QUARTILE :	0.0115	2.00	24.50	6.23	120.25	12.00	1.00
3RD QUARTILE :	0.0235	4.00	32.00	9.99	251.00	15.59	1.00
VOL. WGT. MEAN :	0.0739	3.17	23.06	7.30	152.33	11.62	0.90

	ALUMINUM	COPPER	CADMIUM
	UG/L	UG/L	UG/L
# OF SAMPLES :	12	12	12
MAXIMUM :	456.20	121.40	0.90
MINIMUM :	15.45	5.44	0.20
RANGE :	440.75	115.96	0.70
ARITH. MEAN :	99.51	42.26	0.47
ARITH. STD. DEV :	116.79	36.28	0.24
GEOM. MEAN :	68.51	28.45	0.42
GEOM. STD. DEV. :	2.33	2.70	1.68
1ST QUARTILE :	38.83	11.49	0.30
2ND QUARTILE :	72.44	37.24	0.35
3RD QUARTILE :	103.32	60.65	0.70
VOL. WGT. MEAN :	74.28	36.41	0.45

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY  
-----

STATION NAME : NORTH DUFFERIN/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3,84 TO JAN 2,85

PAGE : 1

	PRECIP.	CONDUCT.	PH	FREE H+	TOTAL H+	SULPHATE	NITRATE
	MM	UMHO/CM	LAB	LAB	GRAN	MG/L	AS N
				MG/L	MG/L		MG/L
# OF SAMPLES :	13	13	13	13	13	13	13
MAXIMUM :	130.0	60.5	4.79	0.1023	0.1380	6.40	0.920
MINIMUM :	15.8	23.0	3.99	0.0162	0.0471	2.25	0.340
RANGE :	114.2	37.5	0.80	0.0861	0.0909	4.15	0.580
ARITH. MEAN :	70.3	40.3	4.23	0.0650	0.0949	4.16	0.625
ARITH. STD. DEV :	33.8	11.7	0.23	0.0260	0.0273	1.24	0.153
GEOM. MEAN :	60.7	38.6	4.23	0.0587	0.0908	3.98	0.607
GEOM. STD. DEV. :	1.9	1.4	1.05	1.6807	1.3784	1.38	1.289
1ST QUARTILE :	45.5	27.6	4.06	0.0389	0.0687	3.20	0.530
2ND QUARTILE :	67.0	41.4	4.16	0.0676	0.0951	4.15	0.575
3RD QUARTILE :	90.5	46.8	4.31	0.0832	0.1145	4.77	0.685
VOL. WGT. MEAN :	*****	37.2	*****	0.0580	0.0874	4.00	0.586
	CALCIUM	CHLORIDE	KJELDAHL	MAGNESIM	POTASSIM	SODIUM	AMMONIUM
	MG/L	MG/L	AS N	MG/L	MG/L	MG/L	AS N
			MG/L				MG/L
# OF SAMPLES :	13	13	13	13	13	13	13
MAXIMUM :	1.090	0.750	0.850	0.260	0.040	0.310	0.700
MINIMUM :	0.100	0.150	0.330	0.045	0.005	0.020	0.268
RANGE :	0.990	0.600	0.520	0.215	0.035	0.290	0.432
ARITH. MEAN :	0.535	0.345	0.528	0.118	0.027	0.096	0.441
ARITH. STD. DEV :	0.265	0.194	0.145	0.062	0.011	0.074	0.134
GEOM. MEAN :	0.465	0.301	0.511	0.105	0.023	0.076	0.423
GEOM. STD. DEV. :	1.832	1.721	1.303	1.662	2.008	2.058	1.353
1ST QUARTILE :	0.360	0.175	0.420	0.077	0.022	0.045	0.332
2ND QUARTILE :	0.450	0.260	0.485	0.095	0.030	0.080	0.387
3RD QUARTILE :	0.690	0.440	0.600	0.125	0.030	0.105	0.543
VOL. WGT. MEAN :	0.557	0.299	0.503	0.126	0.027	0.089	0.412

\*\*\*\*\* : INSUFFICIENT DATA OR NOT APPLICABLE  
NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY  
-----

STATION NAME : NORTH DUFFERIN/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3,84 TO JAN 2,85

PAGE : 2

	PHOSPHOR	MANGANESE	NICKEL	ZINC	IRON	LEAD	VANADIUM
	MG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
# OF SAMPLES :	13	13	13	13	13	13	13
MAXIMUM :	0.0280	29.00	0.60	14.96	353.60	12.22	1.00
MINIMUM :	0.0020	2.00	0.30	5.20	22.80	4.24	0.20
RANGE :	0.0260	27.00	0.30	9.76	330.80	7.98	0.80
ARITH. MEAN :	0.0116	6.46	0.48	8.28	86.02	7.97	0.86
ARITH. STD. DEV :	0.0085	7.01	0.07	2.59	87.52	2.56	0.25
GEOM. MEAN :	0.0090	4.90	0.47	7.94	63.15	7.57	0.80
GEOM. STD. DEV. :	2.1289	1.96	1.19	1.34	2.15	1.41	1.59
1ST QUARTILE :	0.0060	4.00	0.45	6.04	37.54	5.26	0.75
2ND QUARTILE :	0.0070	4.00	0.50	8.67	51.89	7.92	1.00
3RD QUARTILE :	0.0155	5.00	0.50	8.99	87.45	9.40	1.00
VOL. WGT. MEAN :	0.0132	6.99	0.48	7.57	93.86	7.39	0.86

	ALUMINUM	COPPER	CADMIUM
	UG/L	UG/L	UG/L
# OF SAMPLES :	13	13	13
MAXIMUM :	448.90	1.39	0.40
MINIMUM :	22.55	0.58	0.08
RANGE :	426.35	0.81	0.32
ARITH. MEAN :	93.34	1.01	0.15
ARITH. STD. DEV :	114.11	0.25	0.09
GEOM. MEAN :	62.61	0.98	0.13
GEOM. STD. DEV. :	2.31	1.29	1.55
1ST QUARTILE :	33.62	0.85	0.10
2ND QUARTILE :	46.18	0.96	0.10
3RD QUARTILE :	92.38	1.10	0.15
VOL. WGT. MEAN :	101.83	0.97	0.16

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY  
-----

STATION NAME : TORONTO/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3,84 TO JAN 2,85

PAGE : 1

	PRECIP. MM	CONDUCT. UMHO/CM	PH LAB	FREE H+ LAB MG/L	TOTAL H+ GRAN MG/L	SULPHATE MG/L	NITRATE AS N MG/L
# OF SAMPLES :	12	12	11	11	12	12	12
MAXIMUM :	94.6	60.2	7.61	0.0871	0.1230	8.00	1.250
MINIMUM :	21.0	23.2	4.06	0.0000	0.0170	2.85	0.460
RANGE :	73.6	37.0	3.55	0.0871	0.1060	5.15	0.790
ARITH. MEAN :	52.3	39.1	5.15	0.0373	0.0640	5.08	0.764
ARITH. STD. DEV :	23.5	12.8	1.38	0.0334	0.0389	1.30	0.233
GEOM. MEAN :	47.5	37.2	5.01	0.0070	0.0518	4.93	0.734
GEOM. STD. DEV. :	1.6	1.4	1.28	24.1139	2.0595	1.30	1.345
1ST QUARTILE :	34.2	29.1	4.11	0.0001	0.0252	4.45	0.600
2ND QUARTILE :	45.0	35.5	4.41	0.0269	0.0571	5.05	0.690
3RD QUARTILE :	74.0	49.1	5.92	0.0645	0.1007	5.68	0.935
VOL. WGT. MEAN :	*****	39.7	*****	0.0358	0.0632	5.06	0.756

1  
65  
1

	CALCIUM MG/L	CHLORIDE MG/L	KJELDAHL AS N MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L
# OF SAMPLES :	12	12	12	12	12	12	12
MAXIMUM :	4.000	5.450	1.180	0.480	0.105	3.480	1.050
MINIMUM :	0.600	0.100	0.250	0.080	0.005	0.020	0.188
RANGE :	3.400	5.350	0.930	0.400	0.100	3.460	0.862
ARITH. MEAN :	1.657	1.607	0.633	0.281	0.053	0.941	0.539
ARITH. STD. DEV :	1.022	2.000	0.233	0.140	0.029	1.269	0.217
GEOM. MEAN :	1.397	0.781	0.593	0.246	0.044	0.339	0.498
GEOM. STD. DEV. :	1.846	3.546	1.476	1.760	2.210	5.016	1.536
1ST QUARTILE :	0.810	0.365	0.480	0.160	0.035	0.105	0.397
2ND QUARTILE :	1.540	0.570	0.650	0.257	0.047	0.280	0.532
3RD QUARTILE :	2.275	2.690	0.720	0.425	0.065	1.585	0.627
VOL. WGT. MEAN :	1.755	1.816	0.603	0.282	0.053	1.101	0.507

\*\*\*\*\* : INSUFFICIENT DATA OR NOT APPLICABLE  
NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

---

STATION NAME : TORONTO/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3,84 TO JAN 2,85

PAGE : 2

	PHOSPHOR	MANGANESE	NICKEL	ZINC	IRON	LEAD	VANADIUM
	MG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
# OF SAMPLES :	12	12	12	12	12	12	12
MAXIMUM :	0.0290	16.00	1.20	53.93	256.80	73.23	1.00
MINIMUM :	0.0010	3.00	0.50	6.95	30.01	10.85	0.40
RANGE :	0.0280	13.00	0.70	46.98	226.79	62.38	0.60
ARITH. MEAN :	0.0111	9.00	0.64	27.61	135.13	36.05	0.92
ARITH. STD. DEV :	0.0092	4.11	0.26	16.42	79.58	20.50	0.20
GEOM. MEAN :	0.0070	8.07	0.60	23.16	111.14	30.64	0.89
GEOM. STD. DEV. :	3.1514	1.66	1.41	1.90	2.00	1.85	1.34
1ST QUARTILE :	0.0032	5.50	0.50	15.06	61.32	18.62	1.00
2ND QUARTILE :	0.0085	9.00	0.50	22.70	123.22	33.52	1.00
3RD QUARTILE :	0.0180	12.50	0.75	40.97	198.90	55.54	1.00
VOL. WGT. MEAN :	0.0104	9.02	0.62	28.26	136.80	36.87	0.92

	ALUMINUM	COPPER	CADMIUM
	UG/L	UG/L	UG/L
# OF SAMPLES :	12	12	12
MAXIMUM :	255.10	13.55	19.00
MINIMUM :	43.41	0.98	0.10
RANGE :	211.69	12.57	18.90
ARITH. MEAN :	116.26	5.84	1.79
ARITH. STD. DEV :	65.67	3.69	5.42
GEOM. MEAN :	100.28	4.74	0.29
GEOM. STD. DEV. :	1.77	2.06	4.21
1ST QUARTILE :	63.58	3.25	0.10
2ND QUARTILE :	96.90	5.19	0.25
3RD QUARTILE :	160.70	8.41	0.38
VOL. WGT. MEAN :	112.61	5.61	1.48

1  
96  
1



PART VIII

SUMMARY STATISTICS OF PRECIPITATION CONCENTRATION BY REGION

1984

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY  
-----

STATION NAME : HALDIMAND-NORFOLK REGION(NEMP)/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3,84 TO JAN 2,85

PAGE : 1

	PRECIP.	CONDUCT.	PH	FREE H+	TOTAL H+	SULPHATE	NITRATE
	MM	UMHO/CM	LAB	LAB	GRAN	MG/L	AS N
				MG/L	MG/L		MG/L
# OF SAMPLES :	23	23	23	23	23	23	23
MAXIMUM :	141.0	60.5	4.79	0.1023	0.1380	8.15	1.080
MINIMUM :	14.0	23.0	3.99	0.0162	0.0471	2.15	0.340
RANGE :	127.0	37.5	0.80	0.0861	0.0909	6.00	0.740
ARITH. MEAN :	76.0	39.7	4.26	0.0605	0.0905	4.29	0.654
ARITH. STD. DEV :	35.3	11.0	0.22	0.0245	0.0254	1.43	0.182
GEOM. MEAN :	65.4	38.2	4.26	0.0546	0.0869	4.07	0.631
GEOM. STD. DEV. :	1.9	1.3	1.05	1.6558	1.3468	1.40	1.318
1ST QUARTILE :	52.0	28.5	4.08	0.0389	0.0657	3.20	0.530
2ND QUARTILE :	75.0	39.8	4.17	0.0625	0.0891	4.02	0.600
3RD QUARTILE :	101.3	46.8	4.38	0.0804	0.1145	5.07	0.780
VOL. WGT. MEAN :	*****	37.4	*****	0.0545	0.0841	4.19	0.622

	CALCIUM	CHLORIDE	KJELDAHL	MAGNESIM	POTASSIM	SODIUM	AMMONIUM
	MG/L	MG/L	AS N	MG/L	MG/L	MG/L	AS N
			MG/L				MG/L
# OF SAMPLES :	23	23	23	23	23	23	23
MAXIMUM :	2.350	0.760	1.780	0.450	0.270	0.385	1.600
MINIMUM :	0.100	0.150	0.330	0.040	0.005	0.020	0.232
RANGE :	2.250	0.610	1.450	0.410	0.265	0.365	1.368
ARITH. MEAN :	0.581	0.367	0.643	0.117	0.046	0.131	0.543
ARITH. STD. DEV :	0.471	0.209	0.319	0.091	0.054	0.108	0.301
GEOM. MEAN :	0.460	0.317	0.589	0.096	0.032	0.097	0.485
GEOM. STD. DEV. :	2.004	1.720	1.505	1.857	2.302	2.230	1.590
1ST QUARTILE :	0.300	0.195	0.420	0.055	0.022	0.047	0.332
2ND QUARTILE :	0.415	0.285	0.560	0.092	0.030	0.090	0.470
3RD QUARTILE :	0.710	0.495	0.700	0.125	0.040	0.145	0.592
VOL. WGT. MEAN :	0.592	0.336	0.642	0.124	0.048	0.126	0.532

\*\*\*\*\* : INSUFFICIENT DATA OR NOT APPLICABLE  
NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

---

STATION NAME : HALDIMAND-NORFOLK REGION(NEMP)/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3,84 TO JAN 2,85

PAGE : 2

	PHOSPHOR	MANGANESE	NICKEL	ZINC	IRON	LEAD	VANADIUM
	MG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
# OF SAMPLES :	23	23	23	23	23	23	23
MAXIMUM :	0.0780	37.00	2.00	28.26	439.30	13.01	2.00
MINIMUM :	0.0020	2.00	0.30	5.20	22.80	4.24	0.20
RANGE :	0.0760	35.00	1.70	23.06	416.50	8.77	1.80
ARITH. MEAN :	0.0176	7.83	0.63	10.09	92.46	8.31	0.87
ARITH. STD. DEV :	0.0179	8.86	0.44	5.19	107.34	2.42	0.38
GEOM. MEAN :	0.0119	5.45	0.56	9.17	61.53	7.96	0.76
GEOM. STD. DEV. :	2.3879	2.18	1.56	1.53	2.32	1.36	1.81
1ST QUARTILE :	0.0060	3.00	0.50	6.53	32.03	6.47	0.60
2ND QUARTILE :	0.0090	4.50	0.50	8.76	47.18	7.92	1.00
3RD QUARTILE :	0.0195	7.50	0.50	11.52	89.71	9.97	1.00
VOL. WGT. MEAN :	0.0186	8.10	0.62	9.94	96.97	7.74	0.84

	ALUMINUM	COPPER	CADMIUM
	UG/L	UG/L	UG/L
# OF SAMPLES :	23	23	23
MAXIMUM :	539.00	4.01	0.40
MINIMUM :	19.11	0.58	0.07
RANGE :	519.89	3.43	0.33
ARITH. MEAN :	102.50	1.41	0.16
ARITH. STD. DEV :	136.09	0.95	0.09
GEOM. MEAN :	61.98	1.21	0.14
GEOM. STD. DEV. :	2.49	1.67	1.63
1ST QUARTILE :	30.34	0.86	0.10
2ND QUARTILE :	49.32	1.02	0.10
3RD QUARTILE :	92.38	1.37	0.19
VOL. WGT. MEAN :	108.16	1.34	0.17

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

---

STATION NAME : SUDBURY REGION/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3,84 TO JAN 4,85

PAGE : 1

	PRECIP.	CONDUCT.	PH	FREE H+	TOTAL H+	SULPHATE	NITRATE
	MM	UMHO/CM	LAB	LAB	GRAN	MG/L	AS N
				MG/L	MG/L		MG/L
# OF SAMPLES :	30	27	27	27	27	27	27
MAXIMUM :	145.0	85.0	7.29	0.1660	0.2210	6.90	1.760
MINIMUM :	6.6	6.6	3.78	0.0001	0.0279	0.80	0.080
RANGE :	138.4	78.4	3.51	0.1659	0.1931	6.10	1.680
ARITH. MEAN :	59.0	38.5	4.34	0.0643	0.0957	3.20	0.630
ARITH. STD. DEV :	38.2	17.5	0.63	0.0337	0.0413	1.42	0.464
GEOM. MEAN :	47.2	34.6	4.31	0.0459	0.0878	2.91	0.478
GEOM. STD. DEV. :	2.0	1.7	1.12	4.2674	1.5423	1.58	2.224
1ST QUARTILE :	28.4	28.1	4.11	0.0479	0.0727	2.07	0.305
2ND QUARTILE :	47.3	33.3	4.21	0.0603	0.0882	2.85	0.470
3RD QUARTILE :	78.5	47.5	4.30	0.0759	0.1045	4.07	0.790
VOL. WGT. MEAN :	*****	34.9	*****	0.0585	0.0869	3.16	0.503

	CALCIUM	CHLORIDE	KJELDAHL	MAGNESIM	POTASSIM	SODIUM	AMMONIUM
	MG/L	MG/L	AS N	MG/L	MG/L	MG/L	AS N
			MG/L				MG/L
# OF SAMPLES :	25	27	26	25	25	25	27
MAXIMUM :	0.640	4.600	7.100	0.190	1.070	3.880	5.700
MINIMUM :	0.030	0.020	0.120	0.000	0.000	0.000	0.000
RANGE :	0.610	4.580	6.980	0.190	1.070	3.880	5.700
ARITH. MEAN :	0.223	0.689	0.695	0.040	0.071	0.448	0.503
ARITH. STD. DEV :	0.163	1.059	1.325	0.039	0.211	0.836	1.057
GEOM. MEAN :	0.176	0.318	0.427	0.037	0.021	0.190	0.285
GEOM. STD. DEV. :	2.064	3.459	2.210	1.998	4.515	3.857	2.927
1ST QUARTILE :	0.095	0.120	0.300	0.015	0.005	0.047	0.147
2ND QUARTILE :	0.180	0.230	0.395	0.030	0.020	0.137	0.275
3RD QUARTILE :	0.250	0.710	0.620	0.040	0.037	0.377	0.438
VOL. WGT. MEAN :	0.198	0.444	0.791	0.037	0.091	0.275	0.586

\*\*\*\*\* : INSUFFICIENT DATA OR NOT APPLICABLE  
NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY  
-----

STATION NAME : SUDBURY REGION/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3,84 TO JAN 4,85

PAGE : 2

	PHOSPHOR	MANGANSE	NICKEL	ZINC	IRON	LEAD	VANADIUM
	MG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
# OF SAMPLES :	26	25	25	25	25	25	25
MAXIMUM :	0.5500	16.00	72.00	67.88	1300.00	44.94	1.00
MINIMUM :	0.0000	0.50	0.50	1.23	5.96	3.89	0.20
RANGE :	0.5500	15.50	71.50	66.65	1294.04	41.05	0.80
ARITH. MEAN :	0.0333	2.96	17.89	11.44	153.55	13.46	0.81
ARITH. STD. DEV :	0.1064	3.28	19.73	13.41	260.80	9.61	0.35
GEOM. MEAN :	0.0127	1.98	6.51	7.56	71.24	11.00	0.68
GEOM. STD. DEV. :	4.5902	2.45	6.06	2.48	3.46	1.89	2.02
1ST QUARTILE :	0.0015	1.00	0.50	4.24	30.80	7.16	0.60
2ND QUARTILE :	0.0090	2.00	9.00	6.23	64.06	10.77	1.00
3RD QUARTILE :	0.0170	3.00	28.00	13.36	148.35	16.07	1.00
VOL. WGT. MEAN :	0.0430	2.83	15.52	9.13	105.92	11.42	0.84

	ALUMINUM	COPPER	CADMIUM
	UG/L	UG/L	UG/L
# OF SAMPLES :	25	25	25
MAXIMUM :	456.20	121.40	25.00
MINIMUM :	8.14	0.77	0.05
RANGE :	448.06	120.63	24.95
ARITH. MEAN :	73.84	30.35	1.42
ARITH. STD. DEV :	88.20	32.49	4.93
GEOM. MEAN :	49.24	13.53	0.37
GEOM. STD. DEV. :	2.46	4.57	3.43
1ST QUARTILE :	27.46	4.56	0.20
2ND QUARTILE :	49.97	15.15	0.30
3RD QUARTILE :	85.30	44.24	0.70
VOL. WGT. MEAN :	58.71	24.90	1.15

PART IX

SUMMARY STATISTICS OF WET DEPOSITION BY STATION

1984

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

---

STATION NAME : BURWASH/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3, 84 TO JAN 4,85

PAGE : 1

	PRECIP. MM	FREE H+ LAB MG/M**2	TOTAL H+ TO PH8.3 MG/M**2	SULPHATE MG/M**2	NITRATE AS N MG/M**2	CALCIUM MG/M**2	CHLORIDE MG/M**2
# OF SAMPLES :	11	10	10	10	10	9	10
MAXIMUM :	122.0	6.7044	9.1744	353.80	44.800	17.820	112.200
MINIMUM :	21.5	0.6697	1.6416	45.60	4.560	1.710	1.140
RANGE :	100.5	6.0347	7.5328	308.20	40.240	16.110	111.060
ARITH. MEAN :	62.0	3.5577	5.1307	169.43	28.891	8.778	28.636
ARITH. STD. DEV :	33.2	2.0089	2.5086	109.43	14.015	4.759	35.089
GEOM. MEAN :	54.2	2.9643	4.5518	137.04	23.531	7.391	14.852
GEOM. STD. DEV. :	1.7	2.0076	1.7106	2.04	2.237	1.998	3.624
1ST QUARTILE :	32.8	1.8409	3.0066	71.87	15.701	5.708	8.383
2ND QUARTILE :	49.7	3.2689	4.8661	135.34	32.665	8.041	12.640
3RD QUARTILE :	78.5	4.4797	6.1410	249.42	36.920	9.287	29.826
VOL. WGT. MEAN :	*****	3.4240	4.9378	163.06	27.805	8.027	27.559

	KJELDAHL AS N MG/M**2	MAGNESIM MG/M**2	POTASSIM MG/M**2	SODIUM MG/M**2	AMMONIUM AS N MG/M**2	PHOSPHOR MG/M**2	MANGANSE MG/M**2
# OF SAMPLES :	9	9	9	9	10	9	9
MAXIMUM :	37.820	2.835	3.240	44.080	31.110	0.5600	0.2430
MINIMUM :	6.840	0.000	0.000	0.000	0.000	0.0285	0.0212
RANGE :	30.980	2.835	3.240	44.080	31.110	0.5315	0.2218
ARITH. MEAN :	23.421	1.445	1.109	13.352	15.759	0.3033	0.0981
ARITH. STD. DEV :	11.837	0.839	1.175	17.030	11.003	0.2172	0.0671
GEOM. MEAN :	20.387	1.431	0.767	6.971	11.262	0.2049	0.0778
GEOM. STD. DEV. :	1.807	1.529	3.008	2.734	1.950	2.9622	2.1605
1ST QUARTILE :	13.468	0.928	0.185	3.205	6.380	0.0924	0.0422
2ND QUARTILE :	17.820	1.386	0.425	5.382	12.662	0.2437	0.0855
3RD QUARTILE :	33.550	1.600	1.542	8.493	24.482	0.4625	0.1147
VOL. WGT. MEAN :	21.714	1.322	1.015	12.209	15.167	0.2812	0.0897

\*\*\*\*\* : INSUFFICIENT DATA

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

NOTE(2): THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION (SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

---

STATION NAME : BURWASH/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3, 84 TO JAN 4,85

PAGE : 2

	NICKEL	ZINC	IRON	LEAD	VANADIUM	ALUMINUM	COPPER
	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2
# OF SAMPLES :	9	9	9	9	9	9	9
MAXIMUM :	0.5590	0.673	4.8741	0.8419	0.122	4.462	1.1475
MINIMUM :	0.0212	0.070	0.3398	0.2229	0.006	0.464	0.0514
RANGE :	0.5378	0.603	4.5343	0.6190	0.116	3.998	1.0961
ARITH. MEAN :	0.1328	0.348	2.2095	0.4787	0.058	1.961	0.3275
ARITH. STD. DEV :	0.1743	0.202	1.3979	0.1814	0.041	1.210	0.3437
GEOM. MEAN :	0.0733	0.289	1.7710	0.4485	0.042	1.648	0.2168
GEOM. STD. DEV. :	2.9903	2.022	2.1858	1.4768	2.701	1.919	2.5971
1ST QUARTILE :	0.0310	0.198	1.2666	0.3339	0.018	1.209	0.1078
2ND QUARTILE :	0.0482	0.296	1.7222	0.4566	0.050	1.463	0.1637
3RD QUARTILE :	0.1256	0.386	2.4491	0.5248	0.074	2.152	0.3354
VOL. WGT. MEAN :	0.1214	0.318	2.0204	0.4378	0.053	1.793	0.2994

CADMIUM

MG/M\*\*2

# OF SAMPLES :	9
MAXIMUM :	0.02795
MINIMUM :	0.00285
RANGE :	0.02510
ARITH. MEAN :	0.01178
ARITH. STD. DEV :	0.00721
GEOM. MEAN :	0.00997
GEOM. STD. DEV. :	1.88873
1ST QUARTILE :	0.00715
2ND QUARTILE :	0.00988
3RD QUARTILE :	0.01246
VOL. WGT. MEAN :	0.01077



ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

---

STATION NAME : DOG'S NEST EAST/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3, 84 TO JAN 2,85

PAGE : 1

	PRECIP.	FREE H+	TOTAL H+	SULPHATE	NITRATE	CALCIUM	CHLORIDE
	MM	LAB MG/M**2	TO PH8.3 MG/M**2	MG/M**2	AS N MG/M**2	MG/M**2	MG/M**2
# OF SAMPLES :	10	10	9	10	10	10	10
MAXIMUM :	141.0	9.6677	13.2534	672.75	126.360	274.950	84.750
MINIMUM :	14.0	1.0378	1.4952	56.00	13.160	15.390	10.640
RANGE :	127.0	8.6299	11.7582	616.75	113.200	259.560	74.110
ARITH. MEAN :	83.4	4.2151	6.8849	367.14	55.205	52.508	31.293
ARITH. STD. DEV :	37.7	2.4672	3.3755	205.16	30.204	78.842	26.624
GEOM. MEAN :	72.1	3.5884	5.9898	301.36	47.786	32.630	24.493
GEOM. STD. DEV. :	1.9	1.8684	1.8613	2.11	1.827	2.337	1.987
1ST QUARTILE :	55.5	2.2508	4.7220	196.04	32.565	15.610	14.895
2ND QUARTILE :	78.3	3.8400	6.2127	298.60	54.458	31.247	21.505
3RD QUARTILE :	112.0	4.7765	7.7802	549.62	59.835	37.560	23.490
VOL. WGT. MEAN :	*****	4.2151	7.1680	367.14	55.204	52.508	31.293

	KJELDAHL	MAGNESIM	POTASSIM	SODIUM	AMMONIUM	PHOSPHOR	MANGANSE
	AS N MG/M**2	MG/M**2	MG/M**2	MG/M**2	AS N MG/M**2	MG/M**2	MG/M**2
# OF SAMPLES :	10	10	10	10	10	10	10
MAXIMUM :	124.600	52.650	18.900	42.375	112.000	7.6050	4.3290
MINIMUM :	5.180	2.170	0.280	2.280	3.976	0.2850	0.1710
RANGE :	119.420	50.480	18.620	40.095	108.024	7.3200	4.1580
ARITH. MEAN :	66.134	10.066	5.802	13.854	55.350	2.0447	0.7773
ARITH. STD. DEV :	36.310	15.113	5.459	13.550	32.393	2.4505	1.2591
GEOM. MEAN :	51.122	6.149	3.575	9.677	41.847	1.2236	0.4504
GEOM. STD. DEV. :	2.549	2.426	3.322	2.391	2.645	2.7799	2.4561
1ST QUARTILE :	29.514	3.360	1.635	5.515	24.465	0.5150	0.2530
2ND QUARTILE :	74.105	5.538	4.852	8.925	58.402	1.1550	0.3765
3RD QUARTILE :	85.000	7.305	6.847	11.756	72.072	1.4265	0.4600
VOL. WGT. MEAN :	66.134	10.066	5.802	13.854	55.350	2.0447	0.7773

\*\*\*\*\* : INSUFFICIENT DATA

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

NOTE(2): THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION  
(SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

---

STATION NAME : DOG'S NEST EAST/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3, 84 TO JAN 2,85

PAGE : 2

	NICKEL	ZINC	IRON	LEAD	VANADIUM	ALUMINUM	COPPER
	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2
# OF SAMPLES :	10	10	10	10	10	10	10
MAXIMUM :	0.2340	3.306	51.3981	1.1409	0.141	63.063	0.4204
MINIMUM :	0.0280	0.210	1.3230	0.1821	0.011	1.089	0.0561
RANGE :	0.2060	3.096	50.0751	0.9587	0.130	61.974	0.3643
ARITH. MEAN :	0.0657	1.045	8.3672	0.6773	0.068	9.595	0.1449
ARITH. STD. DEV. :	0.0637	0.886	15.2028	0.2793	0.045	18.846	0.1155
GEOM. MEAN :	0.0502	0.797	4.2885	0.6124	0.052	4.409	0.1160
GEOM. STD. DEV. :	2.0004	2.177	2.6679	1.6807	2.342	2.890	1.9385
1ST QUARTILE :	0.0285	0.429	2.5699	0.4833	0.025	2.361	0.0681
2ND QUARTILE :	0.0389	0.869	3.5618	0.6701	0.067	3.814	0.0998
3RD QUARTILE :	0.0630	1.091	4.4129	0.8013	0.098	4.827	0.1639
VOL. WGT. MEAN :	0.0657	1.045	8.3672	0.6773	0.068	9.595	0.1449

CADMIUM

MG/M\*\*2

# OF SAMPLES :	10
MAXIMUM :	0.04520
MINIMUM :	0.00140
RANGE :	0.04380
ARITH. MEAN :	0.01570
ARITH. STD. DEV. :	0.01426
GEOM. MEAN :	0.01046
GEOM. STD. DEV. :	2.78684
1ST QUARTILE :	0.00549
2ND QUARTILE :	0.00974
3RD QUARTILE :	0.01815
VOL. WGT. MEAN :	0.01570

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

---

STATION NAME : GERMAIN PARK/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3, 84 TO JAN 2,85

PAGE : 1

	PRECIP. MM	FREE H+ LAB MG/M**2	TOTAL H+ TO PH8.3 MG/M**2	SULPHATE MG/M**2	NITRATE AS N MG/M**2	CALCIUM MG/M**2	CHLORIDE MG/M**2
# OF SAMPLES :	10	10	10	10	10	9	9
MAXIMUM :	146.0	11.0353	15.3300	1080.40	111.320	276.000	60.044
MINIMUM :	11.6	0.0031	0.6555	60.90	18.328	23.780	23.958
RANGE :	134.4	11.0322	14.6745	1019.50	92.992	252.220	36.086
ARITH. MEAN :	73.9	2.9046	5.0405	514.66	54.371	140.559	36.775
ARITH. STD. DEV :	39.9	4.1953	5.4040	322.40	29.937	70.083	11.305
GEOM. MEAN :	61.4	0.2940	2.8876	405.77	47.167	119.468	35.319
GEOM. STD. DEV. :	2.1	20.4742	3.1395	2.29	1.773	2.009	1.350
1ST QUARTILE :	38.0	0.0177	0.9607	282.24	29.774	96.835	25.380
2ND QUARTILE :	72.1	0.2091	2.2456	444.24	43.262	139.011	37.345
3RD QUARTILE :	87.6	3.9922	6.3360	645.89	74.508	155.425	38.973
VOL. WGT. MEAN :	*****	2.9046	5.0405	514.66	54.371	143.375	33.625

	KJELDAHL AS N MG/M**2	MAGNESIUM MG/M**2	POTASSIUM MG/M**2	SODIUM MG/M**2	AMMONIUM AS N MG/M**2	PHOSPHOR MG/M**2	MANGANESE MG/M**2
# OF SAMPLES :	9	9	9	8	10	9	9
MAXIMUM :	154.760	38.115	43.575	30.905	107.310	17.4300	1.0220
MINIMUM :	16.356	5.800	0.326	6.534	14.500	0.3132	0.1856
RANGE :	138.404	32.315	43.248	24.371	92.810	17.1168	0.8364
ARITH. MEAN :	73.411	28.105	8.831	11.476	60.867	3.4622	0.5664
ARITH. STD. DEV :	44.767	10.563	13.319	7.971	32.060	5.4448	0.2931
GEOM. MEAN :	60.731	25.076	4.033	10.076	51.563	1.5276	0.4959
GEOM. STD. DEV. :	1.998	1.818	4.168	1.619	1.935	3.7419	1.7645
1ST QUARTILE :	40.704	22.359	2.135	7.606	28.227	0.5164	0.3218
2ND QUARTILE :	55.368	28.539	4.735	9.345	58.696	1.0070	0.4819
3RD QUARTILE :	91.657	34.850	6.778	10.231	87.305	2.8487	0.6572
VOL. WGT. MEAN :	74.882	28.669	9.008	10.593	60.867	3.5316	0.5347

\*\*\*\*\* : INSUFFICIENT DATA

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

NOTE(2): THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION  
(SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

---

STATION NAME : GERMAIN PARK/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3, 84 TO JAN 2,85

PAGE : 2

	NICKEL	ZINC	IRON	LEAD	VANADIUM	ALUMINUM	COPPER
	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2
# OF SAMPLES :	9	9	9	9	9	9	9
MAXIMUM :	0.2145	5.005	25.2726	5.2802	1.072	31.492	2.5764
MINIMUM :	0.0363	1.127	3.1691	0.5845	0.087	4.132	0.2910
RANGE :	0.1782	3.877	22.1035	4.6957	0.985	27.361	2.2854
ARITH. MEAN :	0.0873	2.345	9.1996	1.9970	0.345	9.654	1.2357
ARITH. STD. DEV :	0.0522	1.224	6.8340	1.4479	0.302	8.639	0.7300
GEOM. MEAN :	0.0770	2.122	7.4963	1.6176	0.262	7.633	1.0389
GEOM. STD. DEV. :	1.6704	1.576	1.9424	1.9958	2.157	1.944	1.9359
1ST QUARTILE :	0.0520	1.599	3.8426	0.9953	0.137	4.173	0.7350
2ND QUARTILE :	0.0780	1.877	7.5611	1.5761	0.225	6.415	0.9518
3RD QUARTILE :	0.0888	2.181	9.2214	1.9189	0.397	9.157	1.3675
VOL. WGT. MEAN :	0.0824	2.214	8.6849	1.8852	0.326	9.114	1.1666

CADMIUM

MG/M\*\*2

# OF SAMPLES :	9
MAXIMUM :	0.01460
MINIMUM :	0.00726
RANGE :	0.00734
ARITH. MEAN :	0.01095
ARITH. STD. DEV :	0.00281
GEOM. MEAN :	0.01063
GEOM. STD. DEV. :	1.30250
1ST QUARTILE :	0.00839
2ND QUARTILE :	0.01015
3RD QUARTILE :	0.01267
VOL. WGT. MEAN :	0.01034

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : HANMER/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3, 84 TO JAN 4, 85

PAGE : 1

	PRECIP. MM	FREE H+ LAB MG/M**2	TOTAL H+ TO PH8.3 MG/M**2	SULPHATE MG/M**2	NITRATE AS N MG/M**2	CALCIUM MG/M**2	CHLORIDE MG/M**2
# OF SAMPLES :	6	5	5	5	5	5	5
MAXIMUM :	103.0	8.6465	11.5662	359.49	91.696	28.655	106.260
MINIMUM :	18.2	0.7141	1.5698	51.77	4.676	4.676	6.680
RANGE :	84.8	7.9324	9.9964	307.72	87.020	23.979	99.580
ARITH. MEAN :	43.9	3.9531	5.8988	166.01	41.847	13.202	48.476
ARITH. STD. DEV. :	31.2	3.4308	4.6733	137.95	34.335	10.197	41.252
GEOM. MEAN :	36.9	2.7292	4.4237	122.67	28.024	10.427	30.396
GEOM. STD. DEV. :	1.9	2.7633	2.3857	2.41	3.157	2.141	3.379
1ST QUARTILE :	20.6	1.2332	2.2055	54.76	12.845	5.572	8.510
2ND QUARTILE :	33.4	1.9530	3.0084	78.08	26.562	7.070	33.304
3RD QUARTILE :	42.8	4.3263	6.7584	180.53	45.924	13.106	59.549
VOL. WGT. MEAN :	*****	3.5390	5.2809	148.62	37.464	11.819	43.398

	KJELDAHL AS N MG/M**2	MAGNESIUM MG/M**2	POTASSIUM MG/M**2	SODIUM MG/M**2	AMMONIUM AS N MG/M**2	PHOSPHOR MG/M**2	MANGANESE MG/M**2
# OF SAMPLES :	5	5	5	5	5	5	4
MAXIMUM :	45.327	3.907	4.168	89.628	35.949	5.6650	0.8336
MINIMUM :	6.012	0.924	0.250	5.177	1.503	0.0500	0.0667
RANGE :	39.315	2.983	3.917	84.451	34.446	5.6150	0.7669
ARITH. MEAN :	21.686	2.052	1.784	41.424	13.431	1.5004	0.2933
ARITH. STD. DEV. :	17.393	1.361	1.582	36.678	13.457	2.3492	0.3661
GEOM. MEAN :	16.321	1.717	1.200	23.437	8.438	0.5386	0.1663
GEOM. STD. DEV. :	2.357	1.941	2.953	3.949	3.238	5.5646	3.3157
1ST QUARTILE :	8.203	0.962	0.587	5.340	3.639	0.1752	0.0668
2ND QUARTILE :	11.035	1.168	0.962	24.897	7.641	0.4507	0.1364
3RD QUARTILE :	23.347	2.213	1.788	53.405	11.963	0.7434	0.5198
VOL. WGT. MEAN :	19.414	1.837	1.597	37.085	12.024	1.3433	0.2319

\*\*\*\*\* : INSUFFICIENT DATA

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

NOTE(2): THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION  
(SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

---

STATION NAME : HANMER/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3, 84 TO JAN 4,85

PAGE : 2

	NICKEL	ZINC	IRON	LEAD	VANADIUM	ALUMINUM	COPPER
	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2
# OF SAMPLES :	4	4	4	4	4	4	4
MAXIMUM :	3.2823	3.537	21.0797	2.3414	0.052	7.904	3.8491
MINIMUM :	0.0167	0.649	1.4152	0.2480	0.007	1.188	0.1574
RANGE :	3.2656	2.888	19.6645	2.0934	0.045	6.715	3.6918
ARITH. MEAN :	1.4376	1.585	7.3320	1.4090	0.028	4.498	2.2899
ARITH. STD. DEV :	1.4217	1.339	9.2979	0.9243	0.019	3.516	1.6945
GEOM. MEAN :	0.5092	1.252	4.0845	1.0583	0.022	3.294	1.3752
GEOM. STD. DEV. :	10.6432	2.143	3.3804	2.7621	2.421	2.628	4.4298
1ST QUARTILE :	0.3586	0.714	1.6506	0.6859	0.014	1.472	0.9383
2ND QUARTILE :	1.2257	1.077	3.4165	1.5234	0.027	4.450	2.5766
3RD QUARTILE :	2.5167	2.455	13.0134	2.1322	0.043	7.524	3.6416
VOL. WGT. MEAN :	1.1368	1.253	5.7979	1.1142	0.022	3.557	1.8108

CADMIUM

MG/M\*\*2

# OF SAMPLES :	4
MAXIMUM :	1.30250
MINIMUM :	0.00668
RANGE :	1.29582
ARITH. MEAN :	0.35725
ARITH. STD. DEV :	0.63076
GEOM. MEAN :	0.07383
GEOM. STD. DEV. :	8.82190
1ST QUARTILE :	0.02669
2ND QUARTILE :	0.05991
3RD QUARTILE :	0.68781
VOL. WGT. MEAN :	0.28250

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

---

STATION NAME : LIVELY/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3, 84 TO JAN 4,85

PAGE : 1

	PRECIP. MM	FREE H+ LAB MG/M**2	TOTAL H+ TO PH8.3 MG/M**2	SULPHATE MG/M**2	NITRATE AS N MG/M**2	CALCIUM MG/M**2	CHLORIDE MG/M**2
# OF SAMPLES :	13	12	12	12	12	11	12
MAXIMUM :	145.0	8.3439	11.8320	589.26	61.732	54.280	42.700
MINIMUM :	20.0	0.0047	2.0680	53.43	6.903	3.600	2.000
RANGE :	125.0	8.3392	9.7640	535.83	54.829	50.680	40.700
ARITH. MEAN :	65.4	3.6910	5.8764	236.32	29.989	16.393	18.612
ARITH. STD. DEV. :	43.2	2.7418	3.3810	171.43	15.169	15.336	11.556
GEOM. MEAN :	53.3	1.9455	5.0670	184.55	25.488	11.662	14.499
GEOM. STD. DEV. :	2.0	7.2894	1.7691	2.12	1.943	2.347	2.335
1ST QUARTILE :	28.4	1.8292	3.2751	117.06	19.394	5.218	10.342
2ND QUARTILE :	46.1	2.8352	5.1045	167.62	31.595	9.670	17.518
3RD QUARTILE :	81.0	5.4518	7.9394	373.75	37.280	18.335	24.427
VOL. WGT. MEAN :	*****	3.5713	5.6859	228.66	29.017	15.048	18.009

	KJELDAHL AS N MG/M**2	MAGNESIUM MG/M**2	POTASSIUM MG/M**2	SODIUM MG/M**2	AMMONIUM AS N MG/M**2	PHOSPHOR MG/M**2	MANGANESE MG/M**2
# OF SAMPLES :	12	11	11	11	12	12	12
MAXIMUM :	653.200	17.480	98.440	28.000	524.400	50.6000	0.8418
MINIMUM :	6.903	0.737	0.074	0.500	0.531	0.0000	0.0400
RANGE :	646.297	16.742	98.366	27.500	523.869	50.6000	0.8018
ARITH. MEAN :	81.767	3.453	11.620	10.981	63.652	4.9952	0.2139
ARITH. STD. DEV. :	182.024	4.977	29.247	8.742	146.302	14.4007	0.2740
GEOM. MEAN :	28.321	1.984	1.127	6.977	17.833	0.9513	0.1241
GEOM. STD. DEV. :	3.556	2.654	9.121	3.339	5.135	5.4305	2.7315
1ST QUARTILE :	10.810	0.848	0.154	3.122	9.300	0.2202	0.0539
2ND QUARTILE :	23.800	1.670	0.627	8.573	20.529	0.6120	0.1204
3RD QUARTILE :	45.575	2.410	5.166	14.098	32.240	1.1848	0.1718
VOL. WGT. MEAN :	79.117	3.169	10.667	10.080	61.589	4.8333	0.2070

\*\*\*\*\* : INSUFFICIENT DATA

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

NOTE(2): THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION (SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

---

STATION NAME : LIVELY/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3, 84 TO JAN 4,85

PAGE : 2

	NICKEL	ZINC	IRON	LEAD	VANADIUM	ALUMINUM	COPPER
	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2
# OF SAMPLES :	12	12	12	12	12	12	12
MAXIMUM :	4.2090	1.772	32.7600	1.9198	0.145	11.496	5.8786
MINIMUM :	0.1600	0.118	1.4316	0.1088	0.006	0.764	0.1088
RANGE :	4.0490	1.654	31.3284	1.8110	0.139	10.732	5.7698
ARITH. MEAN :	1.5586	0.493	10.2940	0.7854	0.061	5.019	2.4604
ARITH. STD. DEV :	1.2112	0.435	9.1765	0.4790	0.049	3.508	1.9166
GEOM. MEAN :	1.0664	0.385	7.1367	0.6404	0.042	3.749	1.5571
GEOM. STD. DEV. :	2.7615	2.015	2.5375	2.0977	2.693	2.387	3.3547
1ST QUARTILE :	0.4740	0.227	3.8486	0.5021	0.023	1.946	0.8431
2ND QUARTILE :	1.5688	0.381	7.3801	0.7219	0.045	4.483	2.2492
3RD QUARTILE :	2.2616	0.585	13.8487	0.9971	0.099	8.090	3.6473
VOL. WGT. MEAN :	1.5081	0.477	9.9603	0.7599	0.059	4.857	2.3806

CADMIUM

MG/M\*\*2

# OF SAMPLES :	12
MAXIMUM :	0.08280
MINIMUM :	0.00600
RANGE :	0.07680
ARITH. MEAN :	0.03026
ARITH. STD. DEV :	0.02243
GEOM. MEAN :	0.02275
GEOM. STD. DEV. :	2.32793
1ST QUARTILE :	0.01337
2ND QUARTILE :	0.02859
3RD QUARTILE :	0.03713
VOL. WGT. MEAN :	0.02928



ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

---

STATION NAME : NORTH DUFFERIN/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3, 84 TO JAN 2, 85

PAGE : 1

	PRECIP. MM	FREE H+ LAB MG/M**2	TOTAL H+ TO PH8.3 MG/M**2	SULPHATE MG/M**2	NITRATE AS N MG/M**2	CALCIUM MG/M**2	CHLORIDE MG/M**2
# OF SAMPLES :	13	13	12	13	13	13	13
MAXIMUM :	130.0	7.3198	10.0104	487.50	78.000	111.800	52.000
MINIMUM :	15.8	1.2843	1.8138	64.90	10.902	7.742	8.058
RANGE :	114.2	6.0355	8.1966	422.60	67.098	104.058	43.942
ARITH. MEAN :	70.3	4.0756	6.1557	280.89	41.151	39.107	21.033
ARITH. STD. DEV :	33.8	1.9108	2.7301	131.61	18.456	31.884	12.243
GEOM. MEAN :	60.7	3.5599	5.4807	241.44	36.824	28.232	18.239
GEOM. STD. DEV. :	1.9	1.8003	1.7223	1.91	1.692	2.401	1.738
1ST QUARTILE :	45.5	2.3803	4.3742	194.11	27.475	11.245	10.900
2ND QUARTILE :	67.0	3.9370	6.4028	277.92	37.450	35.630	18.090
3RD QUARTILE :	90.5	5.0780	8.2954	335.77	48.000	43.086	24.285
VOL. WGT. MEAN :	*****	4.0756	6.4282	280.89	41.151	39.107	21.033

	KJELDAHL AS N MG/M**2	MAGNESIM MG/M**2	POTASSIM MG/M**2	SODIUM MG/M**2	AMMONIUM AS N MG/M**2	PHOSPHOR MG/M**2	MANGANSE MG/M**2
# OF SAMPLES :	13	13	13	13	13	13	13
MAXIMUM :	67.150	24.700	3.900	15.600	55.300	3.2500	2.4070
MINIMUM :	10.780	1.501	0.110	1.080	8.453	0.0820	0.0632
RANGE :	56.370	23.199	3.790	14.520	46.847	3.1680	2.3438
ARITH. MEAN :	35.363	8.886	1.927	6.243	28.952	0.9251	0.4912
ARITH. STD. DEV :	17.125	7.238	1.116	4.602	17.072	0.9984	0.6283
GEOM. MEAN :	30.978	6.360	1.377	4.616	25.644	0.5486	0.2976
GEOM. STD. DEV. :	1.776	2.467	2.957	2.395	1.746	3.0150	2.7397
1ST QUARTILE :	24.110	3.185	1.066	2.007	19.410	0.3000	0.1500
2ND QUARTILE :	32.124	6.745	2.003	5.325	29.600	0.4570	0.3095
3RD QUARTILE :	41.880	9.965	2.510	6.972	33.615	0.9236	0.3975
VOL. WGT. MEAN :	35.363	8.886	1.927	6.243	28.952	0.9251	0.4912

\*\*\*\*\* : INSUFFICIENT DATA

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

NOTE(2): THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION (SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

---

STATION NAME : NORTH DUFFERIN/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3, 84 TO JAN 2,85

PAGE : 2

	NICKEL	ZINC	IRON	LEAD	VANADIUM	ALUMINUM	COPPER
	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2
# OF SAMPLES :	13	13	13	13	13	13	13
MAXIMUM :	0.0650	1.208	29.3488	1.0525	0.130	37.259	0.1362
MINIMUM :	0.0063	0.215	0.4677	0.1566	0.013	0.512	0.0156
RANGE :	0.0587	0.992	28.8811	0.8959	0.117	36.747	0.1207
ARITH. MEAN :	0.0334	0.532	6.5949	0.5192	0.061	7.155	0.0681
ARITH. STD. DEV. :	0.0164	0.257	8.1631	0.2599	0.037	10.178	0.0329
GEOM. MEAN :	0.0286	0.482	3.8311	0.4594	0.049	3.799	0.0593
GEOM. STD. DEV. :	1.9235	1.588	2.9821	1.7099	2.117	3.103	1.8171
1ST QUARTILE :	0.0217	0.367	2.2632	0.3863	0.022	2.123	0.0390
2ND QUARTILE :	0.0309	0.474	3.9528	0.4487	0.054	3.379	0.0683
3RD QUARTILE :	0.0422	0.597	4.9076	0.5464	0.084	5.219	0.0810
VOL. WGT. MEAN :	0.0334	0.532	6.5949	0.5192	0.061	7.155	0.0681

CADMIUM

MG/M\*\*2

# OF SAMPLES :	13
MAXIMUM :	0.03440
MINIMUM :	0.00220
RANGE :	0.03220
ARITH. MEAN :	0.01096
ARITH. STD. DEV. :	0.00968
GEOM. MEAN :	0.00801
GEOM. STD. DEV. :	2.27498
1ST QUARTILE :	0.00536
2ND QUARTILE :	0.00795
3RD QUARTILE :	0.00899
VOL. WGT. MEAN :	0.01096

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

---

STATION NAME : TORONTO/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3, 84 TO JAN 2, 85

PAGE : 1

	PRECIP.	FREE H+	TOTAL H+	SULPHATE	NITRATE	CALCIUM	CHLORIDE
	MM	LAB MG/M**2	TO PH8.3 MG/M**2	MG/M**2	AS N MG/M**2	MG/M**2	MG/M**2
# OF SAMPLES :	12	11	11	12	12	12	12
MAXIMUM :	94.6	5.9305	8.8480	529.76	96.492	378.400	473.000
MINIMUM :	21.0	0.0012	0.6696	108.15	14.905	19.441	3.240
RANGE :	73.6	5.9293	8.1784	421.61	81.587	358.959	469.760
ARITH. MEAN :	52.3	1.9414	3.2439	264.18	39.527	91.691	94.900
ARITH. STD. DEV :	23.5	2.0244	2.7149	136.74	21.998	97.452	141.863
GEOM. MEAN :	47.5	0.3466	2.3243	233.90	34.840	66.348	37.072
GEOM. STD. DEV. :	1.6	21.9286	2.4126	1.68	1.685	2.173	4.208
1ST QUARTILE :	34.2	0.0061	0.8565	159.27	23.515	47.280	16.470
2ND QUARTILE :	45.0	1.2512	1.9370	235.80	35.840	58.400	21.600
3RD QUARTILE :	74.0	3.2921	4.2522	346.00	45.990	98.240	141.620
VOL. WGT. MEAN :	*****	1.8722	3.3353	264.18	39.527	91.691	94.900

	KJELDAHL	MAGNESIM	POTASSIM	SODIUM	AMMONIUM	PHOSPHOR	MANGANSE
	AS N MG/M**2	MG/M**2	MG/M**2	MG/M**2	AS N MG/M**2	MG/M**2	MG/M**2
# OF SAMPLES :	12	12	12	12	12	12	12
MAXIMUM :	57.600	45.408	6.149	283.800	48.400	1.4190	1.5136
MINIMUM :	14.280	2.592	0.162	0.648	10.904	0.0420	0.0972
RANGE :	43.320	42.816	5.987	283.152	37.496	1.3770	1.4164
ARITH. MEAN :	31.487	14.743	2.756	57.549	26.486	0.5447	0.4713
ARITH. STD. DEV :	15.331	11.480	1.639	86.405	12.659	0.4663	0.3690
GEOM. MEAN :	28.182	11.696	2.067	16.093	23.656	0.3303	0.3833
GEOM. STD. DEV. :	1.641	2.046	2.684	6.407	1.662	3.3271	1.9276
1ST QUARTILE :	19.152	8.902	1.817	4.170	15.936	0.1440	0.2985
2ND QUARTILE :	26.500	10.802	2.840	12.210	23.530	0.4605	0.3660
3RD QUARTILE :	46.309	17.120	3.590	86.640	38.293	0.9000	0.4560
VOL. WGT. MEAN :	31.487	14.743	2.756	57.549	26.486	0.5447	0.4713

\*\*\*\*\* : INSUFFICIENT DATA

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

NOTE(2): THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION (SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

---

STATION NAME : TORONTO/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3, 84 TO JAN 2,85

PAGE : 2

	NICKEL	ZINC	IRON	LEAD	VANADIUM	ALUMINUM	COPPER
	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2
# OF SAMPLES :	12	12	12	12	12	12	12
MAXIMUM :	0.0816	4.651	24.2933	5.4802	0.095	15.713	0.7875
MINIMUM :	0.0155	0.225	0.9724	0.3516	0.013	1.407	0.0316
RANGE :	0.0661	4.425	23.3209	5.1286	0.082	14.307	0.7559
ARITH. MEAN :	0.0325	1.476	7.1479	1.9265	0.048	5.884	0.2929
ARITH. STD. DEV :	0.0188	1.253	6.3176	1.5433	0.025	4.008	0.2134
GEOM. MEAN :	0.0287	1.100	5.2780	1.4550	0.042	4.762	0.2251
GEOM. STD. DEV. :	1.6509	2.258	2.2901	2.2188	1.752	2.011	2.2926
1ST QUARTILE :	0.0195	0.655	3.3141	0.7646	0.032	2.683	0.1501
2ND QUARTILE :	0.0265	1.156	5.2269	1.4896	0.039	5.087	0.2557
3RD QUARTILE :	0.0400	1.731	9.1320	2.3369	0.069	8.334	0.3333
VOL. WGT. MEAN :	0.0325	1.476	7.1479	1.9265	0.048	5.884	0.2929

CADMIUM

MG/M\*\*2

# OF SAMPLES :	12
MAXIMUM :	0.79800
MINIMUM :	0.00324
RANGE :	0.79476
ARITH. MEAN :	0.07732
ARITH. STD. DEV :	0.22714
GEOM. MEAN :	0.01371
GEOM. STD. DEV. :	4.17136
1ST QUARTILE :	0.00688
2ND QUARTILE :	0.00940
3RD QUARTILE :	0.01590
VOL. WGT. MEAN :	0.07732

PART X

SUMMARY STATISTICS OF WET DEPOSITION BY REGION

1984

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

-----

STATION NAME : HALDIMAND-NORFOLK REGION(NEMP)/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3, 84 TO JAN 2,85

PAGE : 1

	PRECIP. MM	FREE H+ LAB MG/M**2	TOTAL H+ TO PH8.3 MG/M**2	SULPHATE MG/M**2	NITRATE AS N MG/M**2	CALCIUM MG/M**2	CHLORIDE MG/M**2
# OF SAMPLES :	23	23	21	23	23	23	23
MAXIMUM :	141.0	9.6677	13.2534	672.75	126.360	274.950	84.750
MINIMUM :	14.0	1.0378	1.4952	56.00	10.902	7.742	8.058
RANGE :	127.0	8.6299	11.7582	616.75	115.458	267.208	76.692
ARITH. MEAN :	76.0	4.1362	6.4682	318.39	47.261	44.934	25.494
ARITH. STD. DEV. :	35.3	2.1182	2.9654	169.05	24.693	56.067	19.970
GEOM. MEAN :	65.4	3.5723	5.6933	265.87	41.242	30.066	20.733
GEOM. STD. DEV. :	1.9	1.8045	1.7590	1.98	1.756	2.334	1.855
1ST QUARTILE :	52.0	2.2508	4.4853	196.04	29.595	15.395	12.210
2ND QUARTILE :	75.0	3.8400	6.2127	283.57	45.615	34.322	19.850
3RD QUARTILE :	101.3	5.1680	7.8024	433.72	57.105	42.141	26.520
VOL. WGT. MEAN :	*****	4.1362	6.7522	318.39	47.261	44.934	25.494

	KJELDAHL AS N MG/M**2	MAGNESIM MG/M**2	POTASSIM MG/M**2	SODIUM MG/M**2	AMMONIUM AS N MG/M**2	PHOSPHOR MG/M**2	MANGANSE MG/M**2
# OF SAMPLES :	23	23	23	23	23	23	23
MAXIMUM :	124.600	52.650	18.900	42.375	112.000	7.6050	4.3290
MINIMUM :	5.180	1.501	0.110	1.080	3.976	0.0820	0.0632
RANGE :	119.420	51.149	18.790	41.295	108.024	7.5230	4.2658
ARITH. MEAN :	48.741	9.399	3.612	9.552	40.429	1.4119	0.6156
ARITH. STD. DEV. :	30.701	11.062	4.090	10.077	26.486	1.8227	0.9407
GEOM. MEAN :	38.516	6.267	2.085	6.368	31.729	0.7776	0.3563
GEOM. STD. DEV. :	2.174	2.400	3.354	2.538	2.195	3.0688	2.6211
1ST QUARTILE :	29.514	3.300	1.320	3.462	21.550	0.3400	0.2140
2ND QUARTILE :	37.550	5.871	2.285	6.515	31.662	0.6620	0.3385
3RD QUARTILE :	70.495	9.328	4.170	10.320	53.030	1.4265	0.4530
VOL. WGT. MEAN :	48.741	9.399	3.612	9.552	40.429	1.4119	0.6156

\*\*\*\*\* : INSUFFICIENT DATA

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

NOTE(2): THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION  
(SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

---

STATION NAME : HALDIMAND-NORFOLK REGION(NEMP)/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3, 84 TO JAN 2,85

PAGE : 2

	NICKEL	ZINC	IRON	LEAD	VANADIUM	ALUMINUM	COPPER
	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2
# OF SAMPLES :	23	23	23	23	23	23	23
MAXIMUM :	0.2340	3.306	51.3981	1.1409	0.141	63.063	0.4204
MINIMUM :	0.0063	0.210	0.4677	0.1566	0.011	0.512	0.0156
RANGE :	0.2277	3.096	50.9304	0.9843	0.130	62.551	0.4048
ARITH. MEAN :	0.0475	0.755	7.3655	0.5879	0.064	8.216	0.1015
ARITH. STD. DEV :	0.0455	0.652	11.4763	0.2742	0.040	14.260	0.0870
GEOM. MEAN :	0.0365	0.600	4.0237	0.5205	0.050	4.053	0.0794
GEOM. STD. DEV. :	2.0450	1.926	2.7840	1.7111	2.175	2.944	2.0135
1ST QUARTILE :	0.0277	0.367	2.4644	0.4063	0.022	2.179	0.0569
2ND QUARTILE :	0.0337	0.538	3.9274	0.5344	0.059	3.776	0.0774
3RD QUARTILE :	0.0479	0.884	5.0969	0.7708	0.090	5.860	0.1027
VOL. WGT. MEAN :	0.0475	0.755	7.3655	0.5879	0.064	8.216	0.1015

CADMIUM

MG/M\*\*2

# OF SAMPLES :	23
MAXIMUM :	0.04520
MINIMUM :	0.00140
RANGE :	0.04380
ARITH. MEAN :	0.01303
ARITH. STD. DEV :	0.01184
GEOM. MEAN :	0.00900
GEOM. STD. DEV. :	2.46853
1ST QUARTILE :	0.00536
2ND QUARTILE :	0.00839
3RD QUARTILE :	0.01671
VOL. WGT. MEAN :	0.01303

1  
8  
1

ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

---

STATION NAME : SUDBURY REGION/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3, 84 TO JAN 4,85

PAGE : 1

	PRECIP. MM	FREE H+ LAB MG/M**2	TOTAL H+ TO PH8.3 MG/M**2	SULPHATE MG/M**2	NITRATE AS N MG/M**2	CALCIUM MG/M**2	CHLORIDE MG/M**2
# OF SAMPLES :	30	27	27	27	27	25	27
MAXIMUM :	145.0	8.6465	11.8320	589.26	91.696	54.280	112.200
MINIMUM :	6.6	0.0047	0.6289	19.49	4.162	1.519	1.140
RANGE :	138.4	8.6417	11.2031	569.77	87.534	52.761	111.060
ARITH. MEAN :	59.0	3.6262	5.5100	195.60	31.154	12.767	27.548
ARITH. STD. DEV :	38.2	2.5929	3.3508	146.74	19.884	11.794	29.659
GEOM. MEAN :	47.2	2.2801	4.4724	144.33	23.718	9.070	15.801
GEOM. STD. DEV. :	2.0	4.3313	2.0347	2.33	2.361	2.364	3.192
1ST QUARTILE :	28.4	1.7148	2.8962	68.32	13.240	5.432	8.010
2ND QUARTILE :	47.3	2.7397	4.7659	145.81	31.595	8.528	13.748
3RD QUARTILE :	78.5	5.7637	7.5082	282.40	38.520	16.974	37.520
VOL. WGT. MEAN :	*****	3.4490	5.2408	186.05	29.632	11.672	26.202

	KJELDAHL AS N MG/M**2	MAGNESIM MG/M**2	POTASSIM MG/M**2	SODIUM MG/M**2	AMMONIUM AS N MG/M**2	PHOSPHOR MG/M**2	MANGANSE MG/M**2
# OF SAMPLES :	26	25	25	25	27	26	25
MAXIMUM :	653.200	17.480	98.440	89.628	524.400	50.6000	0.8418
MINIMUM :	2.312	0.000	0.000	0.000	0.000	0.0000	0.0132
RANGE :	650.888	17.480	98.440	89.628	524.400	50.6000	0.8286
ARITH. MEAN :	49.656	2.418	5.837	17.746	36.331	2.6975	0.1828
ARITH. STD. DEV :	124.911	3.444	19.615	22.429	98.750	9.8508	0.2419
GEOM. MEAN :	21.361	1.606	0.931	8.330	12.333	0.4710	0.1030
GEOM. STD. DEV. :	2.955	2.344	5.301	3.601	3.696	5.5687	2.8450
1ST QUARTILE :	10.516	0.905	0.205	4.025	5.710	0.0924	0.0539
2ND QUARTILE :	18.154	1.512	0.647	7.187	12.064	0.4893	0.0979
3RD QUARTILE :	35.735	2.260	2.225	19.149	29.582	0.7500	0.1453
VOL. WGT. MEAN :	46.663	2.210	5.336	16.224	34.556	2.5349	0.1667

\*\*\*\*\* : INSUFFICIENT DATA

NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

NOTE(2): THE VOLUME WEIGHTED MEAN DEPOSITION REPRESENTS THE PRODUCT OF VOLUME WEIGHTED MEAN CONCENTRATION (SEE PART III) AND ANNUAL PRECIPITATION GAUGE DEPTH, DIVIDED BY THE NUMBER OF SAMPLES.



ONTARIO MINISTRY OF THE ENVIRONMENT  
SUMMARY STATISTICS OF CALCULATED DEPOSITIONS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

---

STATION NAME : SUDBURY REGION/CUMULATIVE PRECIP.

PERIOD OF REPORT : JAN 3, 84 TO JAN 4,85

PAGE : 2

	NICKEL	ZINC	IRON	LEAD	VANADIUM	ALUMINUM	COPPER
	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2	MG/M**2
# OF SAMPLES :	25	25	25	25	25	25	25
MAXIMUM :	4.2090	3.537	32.7600	2.3414	0.145	11.496	5.8786
MINIMUM :	0.0167	0.070	0.3398	0.1088	0.001	0.235	0.0514
RANGE :	4.1923	3.467	32.4202	2.2326	0.144	11.261	5.8272
ARITH. MEAN :	1.0035	0.590	6.8492	0.7387	0.055	3.797	1.6101
ARITH. STD. DEV :	1.1968	0.723	8.0510	0.5737	0.043	3.164	1.7900
GEOM. MEAN :	0.3387	0.393	3.7041	0.5722	0.035	2.560	0.7036
GEOM. STD. DEV. :	5.8944	2.362	3.2757	2.0866	3.088	2.683	4.3341
1ST QUARTILE :	0.0585	0.222	1.6025	0.3339	0.020	1.325	0.1722
2ND QUARTILE :	0.3455	0.368	3.3954	0.5397	0.039	2.387	0.6665
3RD QUARTILE :	1.8619	0.605	7.3801	0.8321	0.074	5.064	2.4002
VOL. WGT. MEAN :	0.9150	0.538	6.2450	0.6736	0.050	3.462	1.4681

I  
∞  
∞  
I

CADMIUM

MG/M\*\*2

# OF SAMPLES :	25
MAXIMUM :	1.30250
MINIMUM :	0.00285
RANGE :	1.29965
ARITH. MEAN :	0.07442
ARITH. STD. DEV :	0.25672
GEOM. MEAN :	0.01913
GEOM. STD. DEV. :	3.43311
1ST QUARTILE :	0.00758
2ND QUARTILE :	0.01446
3RD QUARTILE :	0.03046
VOL. WGT. MEAN :	0.06786

